



REPUBLIC OF TANGANYIKA

MINISTRY OF HEALTH

Annual Report  
of the  
Health Division  
1963

VOLUME I

*Prepared by the Chief Medical Officer*



1964

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## 1. GENERAL REVIEW

1.1. As in previous years this Report has been compiled at a time when detailed statistical information is not yet available. The collation and analysis of that information takes some time and the essential figures relating to the medical services will be published separately as Volume II of the Annual Report. The few figures quoted in this part of the Report are as exact as possible in the circumstances, but they are, of course, incomplete and subject to confirmation and correction.

1.2. The number of regions was increased from nine to seventeen during the year. The new regions were formed as follows:—

Arusha Region, comprising Arusha, Masai and Mbulu Districts;  
Coast Region, comprising Bagamoyo, Dar es Salaam, Kisarawe, Mafia and Rufiji Districts;  
Dodoma Region, comprising Dodoma, Kondoa and Mpwapwa Districts;  
Iringa Region, comprising Iringa, Mufindi and Njombe Districts;  
Kigoma Region, comprising Kasulu, Kibondo and Kigoma Districts;  
Kilimanjaro Region, comprising Kilimanjaro and Pare Districts;  
Mara Region, comprising Musoma and North Mara Districts;  
Mbeya Region, comprising Chunya, Mbeya and Rungwe Districts;  
Morogoro Region, comprising Kilosa, Morogoro and Ulanga Districts;  
Mtwara Region, comprising Kilwa, Lindi, Masasi, Mtwara, Nachingwea and Newala Districts;  
Mwanza Region, comprising Geita, Kwimba, Mwanza and Ukerewe Districts;  
Ruvuma Region, comprising Mbinga, Songea and Tunduru Districts;  
Shinyanga Region, comprising Kahama, Maswa and Shinyanga Districts;  
Singida Region, comprising Iramba, Singida and Manyoni Districts;  
Tabora Region, comprising Mpanda, Nzega, Sumbawanga and Tabora Districts;  
Tanga Region, comprising Handeni, Korogwe, Lushoto, Pangani and Tanga Districts;  
West Lake Region, comprising Biharamulo, Bukoba, Karagwe and Ngara Districts.

This considerable increase in the number of regions made it obligatory for the post of regional medical officer to be filled on a part-time basis for the foreseeable future. This principle had already been accepted for a number of the existing regions prior to the reorganization, but with the smaller regions the amount of time which it was necessary to devote to regional duties became less. At the same time as these changes were made the separate regional medical office disappeared and was absorbed into the office of the principal regional hospital.

1.3. The report entitled "The Health Services of Tanganyika" was presented to the Minister early in the year. This was the report compiled by Professor R. M. Titmuss, Dr. B. Abel-Smith, Professor George MacDonald, Dr. A. W. Williams and Dr. C. H. Wood, who were appointed and financed in their investigations by the African Medical and Research Foundation. The report is a most valuable document and was of particular value to the Medical Development Planning Committee appointed by the Minister to advise regarding medical development for the quinquennium 1964–69. The report of that Committee will not be available until early 1964.

1.4. Once again the demands on the curative services provided by Government and voluntary agencies have increased considerably throughout the country. This increase has been particularly noticeable in the urban areas and in Dar es Salaam in particular.

1.5. The major events in hospital construction during the year were the completion of Mpwapwa Hospital, opened by the Minister for Health, and the completion of various extensions and improvements at Pangani, Lushoto, Morogoro, Utete, Njombe and Moshi. Special mention should be made of the commencement of construction of the new 50-bedded psychiatric unit at Muhimbili Hospital and the completion of a building to house the radiological apparatus donated by the Federal Government of Germany. Staff quarters were also erected in several stations. Phase II of the new Mwanza Hospital is no longer a Government project, as it has been taken over by the Tanganyika Episcopal Conference financed by the Misereor Foundation. Considerable progress was made in planning, although it will be well into 1964 before construction actually starts.



1.6. A most important development during the year has been the early steps in the development of a comprehensive tuberculosis scheme in the regions around Lake Victoria. This project, in which Government, local authority and voluntary agencies will all co-operate, has been made possible by very substantial grants from the Misereor Catholic Organization in Europe.

1.7. In the field of medical training, the major event of the year was the opening of the new School of Medicine in Dar es Salaam by Mwalimu Julius K. Nyerere, President of Tanganyika, on Jamhuri Day, 7th December. The occasion was rendered even more memorable by the presence of His Excellency, President Macapagal of the Philippines and Mrs. Macapagal. Although the official opening was not until December, the first intake of students was in April, and pending the completion of the new buildings teaching was carried out in existing buildings at the training school and hospital.

1.8. Some difficulty was experienced in obtaining entrants of an adequate educational standard, with the result that of the 15 candidates admitted initially only ten survived until the end of the year. It is possible to demand a pass in only one principal science subject at advanced level and it is therefore necessary to organize a "bridge" course to bring candidates up to the standard required for admission to the departments of anatomy and physiology.

1.9. Up-grading courses for medical assistants, assistant health inspectors and nurses in Section "B" of the Nursing Register continued throughout the year, again with considerable success. Details of these courses and their results are given later in the Report, but mention is made here of the very considerable assistance again afforded to the training school by Professor R. Geigy of the Swiss Tropical Institute. His rural health centre at Ifakara again had a most successful session which lasted as usual from July to October.

1.10. The services provided directly by the Ministry continued to be supplemented by those provided by voluntary agencies and local authorities.

1.11. The Christian churches continued to make very substantial contributions to the health services of the country. Among the developments undertaken by the voluntary agencies during the year may be mentioned the new leprosarium at Hombolo in the Dodoma Region, the ophthalmic ward built from funds contributed by the Oxford Committee for Famine Relief and the Tanganyika Society for the Blind at Mvumi Hospital, a 40-bedded dispensary block at the Benedictine dispensary, Uwemba, and the completion of a rebuilding programme at Ilembula Hospital maintained by the Lutheran Church of southern Tanganyika. Other developments were a new Catholic hospital at Igogwe in Rungwe District, a new hospital at Chimala by the Church of Christ Mission, a new 100-bedded tuberculosis unit at the Capuchin Hospital, Ifakara, the rebuilding of the Lutheran hospital at Bumbuli, the opening of the Irente Mental Farm Hospital, and extensions to many other hospitals. Special mention is made of the Swedish Save-the-Children Fund leprosy scheme in the West Lake Region. This scheme provides not only the comprehensive leprosy control service in the region, but also valuable training in conjunction with the training school at Mwanza for the new style rural medical aids. Progress was also made in the planning of the new Lutheran hospital at Moshi and the Catholic hospital at Mwanza.

1.12. In June, 1963 the Working Party of the Mission Medical Advisory Committee presented its recommendations to the Minister and the major part of these recommendations was implemented immediately. The Medical (Grants-in-Aid to Voluntary Agencies) Regulations, 1963, effective from 1st July, were published and an additional sum of £99,000 was voted to cover the increased cost of subsidizing the medical work of the voluntary agencies.

1.13. The gross recurrent estimates for the financial year 1962/63 totalled £2,513,007 and actual expenditure amounted to £2,482,595. Appropriations-in-Aid were estimated at £389,659 and the amount realized was £391,846, a decrease in the receipts of the Hospital and Health Services being more than offset by an increase in receipts from the sale of medical stores. Expenditure on buildings under the Development Plan was only £49,463 out of an estimated total of £316,000, the main reason for the saving being due to a change in policy regarding Phase II of the Mwanza Hospital on which it had been planned to spend £100,000 in this financial year. Other building works were also delayed so that it only became necessary to spend £9,392 out of the total of £50,500 allocated for equipment and minor works under the Development Plan.

1.14. An amendment to the Medical Practitioners and Dentists Ordinance was enacted during the year, so as to allow of the licensing by the Medical Council of Assistant Medical Officers and Assistant Dental Officers. Details of this amendment are found in para. 26 of the Report.



## 2. STAFF

2.1. During 1963 ten expatriate doctors and eighteen expatriate nursing sisters left the service on premature retirement or on completion of contract, but at the end of the year there was a total of three more registered practitioners in the service than at the beginning of the year.

2.2. With the exception of the cadre of medical practitioners there was a considerable increase in all cadres. In the case of the nursing service, the up-grading scheme whereby nurses in Section "B" of the Register are given a year or so additional training in order to qualify for registration in Section "A" of the Register continued with considerable success. Details of nursing training will be found in para. 25 of the Report. In general it may be said that although the strength of medical and nursing personnel continued to increase there is still difficulty in maintaining the services owing to the greatly increased demands upon it by the general public and the temporary depletion of staff necessitated by post-graduate and up-grading courses of instruction.

2.3. All consultant posts on the establishment were filled with the exception of a second Consultant Pathologist and a Consultant in Public Health. Both these posts were established to augment the teaching staff at the School of Medicine in Dar es Salaam and in neither case was it considered necessary to fill the posts before the end of the calendar year.

2.4. Considerable help was received from outside agencies, among whom are mentioned the London Hospital for Tropical Diseases, which provided a Consultant Physician, the Basle Foundation, which provided a full-time Biologist throughout the year and considerable assistance in the way of short-term teaching staff, the Rockefeller Foundation which provided a Consultant Physician/Physiologist, the American Peace Corps, which provided a valuable contingent of nurses to take the place of nurses absent from duty on up-grading courses both in Tanganyika and overseas, the Government of Israel which provided specialist staff and training facilities under a technical assistance scheme, and the World Health Organization, which provided health teachers for the training of nurses. The British Department of Technical Co-operation, of course, continued to pay the overseas addition to the salaries of a large number of expatriate professional staff and post-graduate training facilities in the United Kingdom.

2.5. Further details regarding the training of staff, etc., will be found in paras. 22 and 25 of the Report.

## 3. COMMUNICABLE DISEASES

### 3.1. DIRECT INFECTIONS

#### 3.1.1. *Smallpox*

Smallpox was prevalent during 1963 only in the south-west and west of the country. The serious threat posed by the large-scale epidemic in Northern Rhodesia was countered effectively by intensive vaccination campaigns along the border from Mbeya to Sumbawanga, and similar measures were successful in containing an outbreak that had entered Ngara across the western borders. Very large numbers of people were vaccinated in the Mwanza, Ngudu, Maswa and Shinyanga Regions, from which outbreaks of smallpox spread southwards towards Nzega before being interrupted. Elsewhere in Tanganyika the incidence of the disease was extremely low, attributable to the extensive vaccination campaigns of the preceding two years. Particularly was this trend apparent in the Dodoma and Singida Regions (formerly the Central Region), where a marked contrast between the 1962 and the 1963 incidence occurred. In the former year a major epidemic of smallpox in the Kondoa District had been dealt with by widespread vaccination, and in 1963 not a single case was confirmed throughout the district.

#### 3.1.2. *Poliomyelitis*

Fewer cases of poliomyelitis have been reported in 1963 than in the preceding two years, the distribution of the disease continuing to be sporadic throughout the country, although it is acknowledged that many mild cases are missed. Immunisation campaigns, using both Salk vaccine supplied against payment, and, later in the year, as a gift from the British Government, free of charge, and the oral preparation free of charge, have been carried out in many parts of Tanganyika at clinics and primary schools. In some places the large number of defaulters from the second dose of Salk vaccine interfered with the usefulness of the campaign.

### 3.1.3. *Leprosy*

See paragraph 18.

### 3.1.4. *Tuberculosis*

See paragraph 19.

### 3.1.5. *Dysenteries and Enteric Fevers*

Enteric fever continues to be notified sporadically from all regions, and small outbreaks occurred at Mikumi in the Morogoro Region at the end of the year, and Machame on Kilimanjaro. In the Tanga Region the number of confirmed cases of typhoid was the lowest for five years, and it is considered that many of the clinically diagnosed (but not confirmed) cases may in fact have been brucellosis. The incidence of the latter is increasing, attention being focussed particularly upon *B. melitensis* in the Bumbuli area. The dysenteries continue to provide many cases throughout Tanganyika. In the last quarter of the year in the Mwanza Region an unusually high incidence of dysentery clinically similar to the bacillary form was suspected of having a viral aetiology, and many cases of severe gastro-enteritis were reported among children treated at Ndolage and Biharamulo hospitals. Amoebiasis continued to be a problem, being prevalent particularly in the Morogoro, Njombe and Kilimanjaro areas.

### 3.1.6. *Trepanematosi*

A few cases of yaws are reported in widely separated areas, but it is interesting to observe that this condition, once one of the principal medical problems encountered in Tanganyika, has never become re-established following the nation-wide eradication campaigns undertaken some 35 years ago. In the western districts, Kibondo and Kasulu, cases may still be seen in some numbers, but this is attributable to immigration from endemic foci to the west of Tanganyika.

### 3.1.7. *Cerebro-spinal Meningitis*

Cases of the disease continued to occur on a sporadic basis throughout the country, but in the Morogoro Region particularly the decrease in cases noted in 1962 has been maintained. Only in the Mpanda area of the Tabora Region has an outbreak been reported. During the second half of the year 59 cases, with a mortality rate of 18 per cent, were recorded from this area, the outbreak being brought to a close by the use of full curative and preventive measures, aided by the early onset of the rainy season in November.

### 3.1.8. *Rabies*

The incidence of rabies in man was largely confined during 1963 to the Iringa District, where many people bitten by suspect dogs were given protective treatment, but no deaths occurred, and the Njombe District, where three died. One fatal human case, thought to be rabies, was reported from Berega Hospital, but pathological examination failed to provide confirmation. Nearby, at Kilosa, a number of people bitten by dogs suspected of having the disease received protective treatment. Pathological examination of diseased dogs, jackals and hyenas from the Iringa and Njombe Districts has provided ample confirmatory evidence; of greater concern is the confirmation of rabies in dogs from the Kilosa area and Ukaguru, indicating slow spread of the disease eastwards either from its original focus found near Mpwapwa 30 years ago, or from the more recent foci in the Southern Highlands.

### 3.1.9. *Anthrax*

This disease continued to occur to a small extent in the cattle-raising districts. In the Shinyanga, Dodoma and Arusha Regions occasional cases were reported, but a study of the incidence among tribes revealed that the Masai tended to escape the disease, their cattle being sold to neighbours and the meat not habitually eaten by themselves. In the Kilimanjaro Region there has been a decrease by half in the number of cases over the past three years.

## 3.2. VECTOR-BORNE DISEASES

### 3.2.1. *Plague*

The small outbreak of plague reported last year from the Usseri area of the Kilimanjaro (formerly Northern) Region continued into 1963 with four deaths, but confirmation of the disease was not obtained. To the south, at Chome in the South Pare Mountains, increased rodent mortality and reports of one or two doubtful human cases of plague were received during the last three months of 1963. In the enzootic plague area near Singida, two cases clinically resembling the disease were diagnosed in man.



### 3.3. SCHISTOSOMIASIS

*Schistosoma haematobium* infection continued during 1963 to be common throughout Tanganyika, and *S. mansoni* common in all but the eastern coastal belt. Research connected with the transmission and control of bilharzia continued at the East African Institute for Medical Research at Mwanza, the East African Institute of Malaria and Vector-Borne Diseases at Amani, and the Tropical Pesticides Research Institute at Arusha. Full accounts of the activities of these organizations may be found in their annual reports. An entomologist of the Ministry of Health, attached to the Institute at Mwanza, studied vector snails and their control, and a summary of his observations is included in paragraph 13. Research into the comparative efficacy of drugs used in the treatment of vesical schistosomiasis was carried out during the year at Tanga Hospital, under the auspices of the British Medical Research Council, the World Health Organization and the Tanganyika Ministry of Health.

### 4. MATERNAL AND CHILD HEALTH

4.1. The maternity services continued to be utilized to full capacity during 1963. It was noted from several regions that the number of uncomplicated institutional deliveries was increasing as compared with domiciliary. While this trend led to an apparent decrease in the proportion of abnormal deliveries, there is no doubt that the great activity of ante-natal clinics has further reduced the number of uncomplicated deliveries. Domiciliary work has in some places proved difficult because of shortage of staff and lack of transport facilities. However, the demand on hospital beds for ordinary deliveries was such that no alternative remained other than the very early discharge of the uncomplicated case.

4.2. Ante-natal and child welfare clinics have been increasing in popularity year by year. The demand for these services continued during 1963 to exceed the orderly expansion of facilities and staff planned by central and local Government, by voluntary agencies, and through self-help nation-building schemes. The increase in attendances by expectant women and by children at Ngamiani Clinic in Tanga, selected as an example in the report for last year, has shown an even greater advance in 1963. The 20 per cent increase this year at this clinic has unfortunately necessitated limitation of home visiting by the busy staff, while in the clinic itself "work had to be regimented to a degree that endangered the friendly helpful atmosphere so necessary for effective health education".

4.3. U.N.I.C.E.F. assistance continued to be generous, dried skim milk, cod liver oil, triple antigen and drug and diet supplements being supplied to the maternal and child welfare services and proving to be a considerable inducement to regular attendance.

### 5. SCHOOL HEALTH

5.1. The health of school children throughout the country is supervised by the district medical officer or staff of the appropriate voluntary agency. Schools were visited during 1963 whenever possible by members of the local hospital or health centre, and the children examined, treated and given instructional talks on matters of health and hygiene. Some of the larger secondary schools maintained their own medical staff, an example being Mkwawa High School in the Iringa Region which employed a nursing sister, and the smaller institutions had first aid facilities. The formal school health service provided in Dar es Salaam by the Health Department of the City Council was again enlarged during 1963.

5.2. The usual epidemic diseases of childhood continued to be prevalent in schools during the year. In one outbreak of mumps at a Secondary Boys' School at Tabora, six cases of orchitis were encountered among 50 patients. Bilharzia and hookworm remained the principal chronic conditions in most parts of the country. It was noted that the number of simple eye refractions leading to the provision of spectacles has increased considerably.

5.3. Children in many primary schools received poliomyelitis immunization without charge during the second half of the year. Vaccination was carried out against smallpox and tuberculosis, the latter, where preliminary Heaf testing was done, among negative reactors.

### 6. HEALTH EDUCATION

6.1. Activities of the Health Education Unit outside Dar es Salaam continued to be hampered by lack of field staff. However, an Assistant Medical Officer joined the Unit in August, having completed the London University course for a Diploma in Health Education. The Unit undertook a considerable amount of work in Dar es Salaam in association with the Community Development Division of the Ministry of Co-operative and Community Development, with the City Council, and with voluntary agencies.



6.2. The standardized health education teaching kit was completed during the year. By the end of October all material including visual aids was in hand, and the book was in the process of being printed. The production of other educational material by the Unit, in the form of charts, posters, leaflets and similar visual aids, had to be expanded to meet an increased demand from the field. Scripts for the broadcasting of health programmes were prepared. Staff of the Unit continued to undertake teaching duties, and seminars for Government and private organizations and individuals were held.

6.3. Throughout the country informal teaching sessions were arranged by health staff, close co-operation being obtained with officers of the Community Development Division. The importance of this teaching has been fully appreciated by District Councils, and the assistance of Village Development Committees in matters of health education increasingly obtained. Reports from various regions have stressed the importance placed on instructional talks given by local health staff to village groups, the topics regarded as of most value being the disposal of filth, the construction of pit latrines, and the provision of clean water supplies. In the Arusha Region some 2,500 pit latrines were constructed following talks by the health staff. In the Tanga Region it was noted that a highly valuable rostrum for health education talks was still the Mother and Child Welfare Clinic; and in this region the influence of the Ross Institute in the field of health education in industry has continued to be important.

## 7. NUTRITION AND FOOD SUPPLIES

7.1. The increasing interest in nutrition which was reported last year has continued in 1963. A most important event was a radio broadcast to the nation by the President of the Republic, Mwalimu Julius K. Nyerere, at the opening of Freedom from Hunger week; the considerable influence of this speech was reinforced by its distribution in pamphlet form, and was supported by statements on nutrition by the Ministers for Health and Agriculture.

7.2. Parallel with this increasing interest the variety of activities and work of the Nutrition Unit of the Ministry of Health has also expanded. The signing by the Government of Tanganyika and W.H.O. of a "Plan of Operations for Improving the Nutrition of the People of Tanganyika" was an event of importance. Dr. X. Kondakis, W.H.O. Nutrition Medical Officer, arrived to commence a two-year period of study of the nutritional status of people in the Dodoma Region and elsewhere in the country.

7.3. The selection of Tanganyika by F.A.O. and U.N.I.C.E.F. for the holding of a series of national nutrition seminars was an indication of confidence in the desire of the population to strive for an improvement in standards of nutrition. The first seminar was opened by the Vice-President of Tanganyika in May and was followed by a second seminar in June for heads of departments and divisions and for technical personnel. Both seminars were held in Dar es Salaam. From the deliberations came the adoption of plans for an applied nutrition project to be undertaken at Hombolo in the Dodoma District. Overall co-ordination of the project is the task of the Community Development Division, assisted by the Ministries of Agriculture, Education and Health. A special training course was held at Dodoma in September for field workers connected with the project, and Plan of Operations requesting assistance from F.A.O. and U.N.I.C.E.F. was submitted.

7.4. In August the Medical Officer (Nutrition) attended the Sixth International Nutrition Congress in Edinburgh, where he presented two papers. He also attended and addressed the C.C.T.A. Annual Meeting, the Vice-President's Seminar on Village Settlement and Nation Building, the E.C.A. Course for Community Development Workers, the U.N.I.C.E.F. Seminar on problems of obstetrics and the new-born, the U.S. A.I.D. course for Teacher-Training Instructors, and the Ross Institute course for management and welfare workers.

7.5. The year began with famine conditions still present in much of the Dodoma Region, but only isolated pockets of food shortage elsewhere. Relief measures consisting mainly of the free issue of American maize and milk powder were successful in alleviating hunger, and no deaths due to starvation are known to have occurred. Pellagra, which broke out during the famine of the preceding year, disappeared early in 1963, the most frequent nutritional disorders remaining in young children being kwashiorkor and nutritional marasmus. Before the famine in the Dodoma Region had completely passed, a visit was paid by the Medical Officer (Nutrition) to the adjoining Singida District. There the nutritional status of the people was better than was found in surveys around Dodoma and Kondoa. An attempt was made to introduce more nutritional features into the successful campaign of community development proceeding in this district, since study of the dietary habits of the Wanyaturu



revealed that they grow practically no fruit or vegetables, but consume many varieties of wild fruits and leaves. Residual effects of the famine were also manifest in the Handeni District of the Tanga Region, where a marked increase in ulcers of the legs was noted.

7.6. During 1963, harvests in the Dodoma Region and elsewhere were well above average, and by mid-year famine relief measures were discontinued for the first time in nearly three years. But despite this improvement in food supplies in the worst affected rural areas, stress was placed by the Nutrition Unit on continuation of the studies and preventive measures being undertaken there. Two Nutrition Officers were posted from Dar es Salaam, one to Dodoma and the other to Mwanza. Among the activities undertaken outside Dar es Salaam was a survey in the Ukinga Division of the Njombe District, which confirmed the high incidence of non-toxic goitre reported some years ago. Trials of iodine and thyroid extract among affected school children indicated the value of these substances. In the Arusha District investigations brought to light the presence of extensive fluorotic bone changes in certain inhabitants, a problem also known for many years but not hitherto adequately studied. This investigation continues, in co-operation with the Consultant Radiologist. Studies of the nutritional status of the population in various parts of Tanganyika, particularly the Dodoma, Hombolo and Mwanza areas, were undertaken as a routine part of the duties of the Unit. Further work upon the toxicity to the liver of *Aspergillus flavus* contaminating ground nuts proved to be inconclusive, but development of an antibody test for aflatoxin is being undertaken by the British Medical Research Council.

7.7. In the field of education in nutrition, lectures, talks and demonstrations were given by staff of the Nutrition Unit, and by the health personnel throughout the country. The co-operation achieved between medical staff, particularly the Nutrition Officers, much of whose time has been taken up by teaching, and staff of the Community Development Division, has been an important asset in this work. The nutrition teacher stationed in Dar es Salaam devoted much of her time to teaching at women's clubs and community centres, as well as at clinics and by means of radio broadcasts, and the Press was frequently supplied with copy and pictures for the same purpose. The 40,000 copies of the Nutrition Unit booklet "Nutrition as Part of Village Self Help and Development Plans" were all issued and found useful by village development committees. Two more pamphlets were produced by the Unit, "Chakula Bora kwa Afya" and "Towards Better Nutrition", and it is hoped that these will later be printed so that a wide distribution is ensured.

7.8. Other important features of nutrition work during 1963 included advances made in the field of supplementary feeds for primary school children; a study by the W.H.O. Nutrition Medical Officer of the favourable effects of a mid-day meal provided for factory workers; negotiations to establish a factory in Tanganyika for the manufacture of a high protein soya food suitable for small children; the strengthening of the Freedom from Hunger movement and the establishment of a technical committee with the Medical Officer (Nutrition) as Chairman; the entry into the field of the Save the Children Fund nutrition team; steps taken towards the introduction of legislation on vitamin and iron enrichment of milled cereal flours; the introduction of nutrition activities to self-help and nation-building schemes; and the drawing up by a F.A.O. expert of food balance sheets for Tanganyika. In connection with these and other projects the following scientific articles were published:—

LATHAM, M. C. "A nutrition survey of parts of the Rufiji District". *East African Medical Journal*.

LATHAM, M. C. "The nutritional aetiology of a neuropathy found in Tanganyika". *British Journal of Nutrition*.

LATHAM, M. C. "Maternal nutrition in Africa". *Journal of Tropical Paediatrics*.

## 8. ENVIRONMENTAL HYGIENE

### 8.1. URBAN HOUSING AND SANITATION

8.1.1. An improvement to report under this heading is the continued steady progress being made in the replacement of the old thatched roofs by corrugated iron sheets. In many urban areas "roof loan" arrangements exist, whereby loans are granted for the specific purpose of improving housing by the replacement of the thatch roof.

8.1.2. In few urban areas has there been much building in medium and low density areas, and housing accommodation in these areas is at a premium. The result of this has been an upward surge in rents which has encouraged a few landlords to carry out improvements in high density housing areas in the hope of attracting tenants willing to pay higher rents.

8.1.3. The problem of the low standard of building in the peri-urban areas, especially around Arusha, remains, and any enlargement of the Town Council area would no doubt result in a move farther afield by the present occupants of these shacks, thus doing very little to solve the problem. The unification of the Town Council with the surrounding District Council, as advocated in last year's report, would still appear to be the best long-term solution.

8.1.4. Refuse collection and disposal has, for a variety of reasons, been unsatisfactory in many towns. The main problems here are generally lack of transport, labour and funds, the latter of course being the main reason. Many towns report an inadequate service, although efforts are made to keep the main areas clean.

8.1.5. The most pressing problem in the highly built up commercial/residential areas of the towns is that of the disposal of waste water and sewage.

Almost every town reports the continual overflow of cesspits and soakage pits, and as the new buildings get bigger and bigger with more and more occupants, the problem is increased beyond the powers of the local council to cope. Very few councils have adequate and efficient cesspit-emptying vehicles; in several towns pits have to be emptied by hand, a completely unsatisfactory, unpleasant and inefficient method.

Even in the towns with adequate equipment the problem of disposal of the contents remains. In most cases no treatment whatsoever is carried out, the sewage being merely dumped at any convenient spot just outside the town boundaries.

8.1.6. Water supplies are generally adequate although in several small places difficulties have been experienced, more particularly in the palatability and quality of the water rather than in quantity.

8.1.7. Several councils have made considerable strides in improvements in the town markets, and one or two completely new markets are under construction.

## 8.2. RURAL SANITATION

8.2.1. Efforts of the limited health staff have been concentrated mainly on health education, particularly in the provision and proper use of pit latrines. In almost all areas some improvement in this direction is reported. Progress in general in the rural areas is impeded by the lack of funds.

8.2.2. The problem of refuse collection and disposal in rural areas, trading centres, etc., is again hampered by lack of funds and equipment, and unfortunately it is usually the sanitary staff who are the first to be dismissed when funds become short.

## 8.3. FOOD HYGIENE

8.3.1. Here the picture is somewhat brighter; most reports indicate considerable improvements in the handling and storage of food and particularly in the standards of construction in food shops. It is unfortunate that little support in this direction is given by the consumers themselves. It is a fact that just as many customers seem to frequent the unsatisfactory food shop, so the shopkeeper has little incentive to improve his shop in order to attract more custom.

8.3.2. Butchers' shops, especially in the Kilimanjaro Region, have shown probably the greatest improvement, and many now have a water tank, sink, with drainage, via a gully trap to a soakage pit.

8.3.3. The *pombe* clubs are still the most unhygienic of the "food" premises, especially those in which the *pombe* is brewed, and unfortunately health staff often find themselves with considerable opposition when recommending the closure of these clubs on hygienic grounds.

8.3.4. Regular inspections of both premises and food are carried out by the staff of the health division; generally speaking the standards of quality of food are satisfactory, although some legal standards require revision.

## 9. INDUSTRIAL HEALTH

9.1. In association with the Medical Officer (Nutrition) from W.H.O., investigations are being carried out into the value of a nutritionally balanced mid-day meal for selected factory workers. The general health and the work output of the employees receiving this meal has improved.

9.2. Generally speaking the major industrial undertakings are provided with medical services for their employees.



9.3. It is reported from some areas that the granting of cash in place of rations on some sisal estates and to other industrial employees has led to a marked deterioration in health. On one sisal estate cases of malnutrition and avitaminosis were seen in adults.

9.4. Most estate labour forces seem to have reduced in numbers, but the smaller labour force is generally more settled and amenable to health education. Smaller numbers of migrant labour are being recruited and this makes it easier for management to control the extent to which disease reservoirs are being constantly replenished by infections brought in by new recruits.

9.5. The Ross Institute has again been active over a large area of the country and has conducted courses for estate managers and personnel officers advocating better standards of housing, water supplies and sanitation.

## 10. INTERNATIONAL PORT HEALTH

10.1. During the year under review no cases of internationally notifiable diseases were reported from any of the country's ports or airports.

10.2. The routine clearance of ships, dhows and schooners arriving in Dar es Salaam continued with a full-time health staff on duty or on call at all times. Arrangements were also made as necessary to meet international flights of aircraft arriving at Ukonga Airport, Dar es Salaam. The number of ocean-going vessels calling at Dar es Salaam increased by 54 to 1,067, but the number of passengers landed decreased by 5,505 or about 25 per cent.

10.3. The Port Health Office maintains general sanitary supervision over the port area and works in close co-operation with the officers of the East African Railways and Harbours administration.

## 11. HEALTH OF PRISONERS

11.1. There was no change in the arrangements for the medical supervision of prisoners, and it is once again satisfactory to note that the health record of the prisoners was generally good and only minor outbreaks of infectious disease were reported. The overcrowding of prisons remains a perennial problem, but that has not apparently been reflected in the statistics of morbidity.

## 12. HOSPITALS

### 12.1. DAR ES SALAAM HOSPITALS

12.1.1. The Dar es Salaam hospital group is composed of the two principal hospitals, Muhimbili and Ocean Road, and eight out-patient clinics and dispensaries. Muhimbili Hospital, the main unit of the group, comprises three main ward blocks with additional blocks for administration and out-patients, X-ray theatre, kitchen, laundry, etc. A start has been made on building a new 50-bedded psychiatric unit adjacent to one of the ward blocks. This is the only building activity that has taken place during the year.

12.1.2. The disposition of beds to the various specialties was as follows:—

Mwaisela Block 254 beds—Medicine and Paediatrics.

Kibasila Block 214 beds—Surgery and Gynaecology.

Sewa Haji Block 236 beds—Tuberculosis, Ophthalmology, E.N.T. and Infectious Disease.

Muhimbili Wards 28 beds—Smallpox, Leprosy.

Psychiatric Unit 10 beds—Psychiatry.

Casualty 6 beds—Observation.

Ocean Road Hospital 120 beds—Obstetrics.

In addition to these specialties there are consultant, X-ray and pathological services, a dental department staffed by assistant dental officers and visited daily by a dental surgeon from the Dental Unit in Ocean Road, and a fully equipped physiotherapy department with two qualified physiotherapists.

12.1.3. The hospital is the main reference centre for patients referred for consultations and specialist treatment from district hospitals throughout the country, but the great majority of referred cases come from the out-patient dispensaries within the Dar es Salaam group. Admissions in 1963 totalled 19,510, as compared with 18,581 in 1962, an increase of some five per cent, and the average daily bed state rose from 647·27 to 690·40 in the same period.

12.1.4. Whilst admissions rose by only five per cent, the number of people attending the out-patients dispensaries rose by 30 per cent from 371,705 to 484,765. On some days at Mnazi Mmoja dispensary over 2,000 cases attended. Why this unprecedented rise has taken place is not clear, but it has certainly presented a problem to which so far no satisfactory answer has been found, as attendances of this order swamp the facilities available and make the practice of a satisfactory standard of medicine impossible to achieve.

## 12.2. DISTRICT HOSPITAL SERVICES

### 12.2.1. *Arusha Region*

This region has Government hospital facilities at Arusha (162 beds), Monduli (58 beds), Mbulu (68 beds) and Oldeani (60 beds). Arusha Hospital had four medical officers, including a surgeon, on the staff throughout the year. Mbulu has been under the care of a medical officer, but Monduli and Oldeani have had assistant medical officers in charge.

There were 10,242 hospital admissions and the average daily bed state was 330.17. Although there were 760 major operations performed at Arusha, the surgeon was able to visit Moshi approximately one day every fortnight.

At Arusha, the Grade II accommodation was transferred to the Mount Meru Hospital, where five beds were down-graded. An assistant dental surgeon was posted to Arusha in the second half of 1963 and from August to December he attended to some 800 patients.

There were no building operations at any of the units in the region.

### 12.2.2. *Coast Region*

This region has Government hospitals at Bagamoyo (39 beds), Kisarawe (35 beds), Utete (35 beds), and Mafia (18 beds).

In Bagamoyo the female wards were re-roofed during the year and male patients were moved temporarily into an adjacent building pending re-roofing of the wards. The question of converting the buildings temporarily being used by the male patients into staff quarters was investigated but proved to be too expensive. A new 13-bedded maternity ward was started under a self-help scheme, but work proceeded slowly and the ward was not completed by the end of the year.

The new hospital at Kisarawe which replaced a dispensary was opened by the Minister for Lands, Forests and Wildlife, the Honourable Alhaj T. S. Tewa, M.P., who is also Member of Parliament for that area. After a slow start attendances rose fairly rapidly during the year and many patients who previously went to Dar es Salaam now avail themselves of in- and out-patient treatment locally.

Utete Hospital is the only one in the region with a medical officer in charge. Work commenced during the year on a rebuilding and renovating programme. The new buildings were nearing completion at the end of the year, but the renovations will be delayed until after the long rains in 1964. When the programme is complete there will be 59 beds. Utete Hospital reported an increase in out-patient attendances from 24,544 in 1962 to 127,056 in 1963.

The small bedded dispensary at Mafia maintained a daily in-patient average of 16.97 during the year. About a quarter of the patients are drawn from the mainland. Considerable enthusiasm was felt in the island towards building a new ward by self-help. However, in view of the fact that it is likely that a new hospital will be built shortly, the islanders have been encouraged to direct their energies to building a maternity and child welfare clinic and health office near the existing hospital site. The present building being used for this purpose can then be converted into a maternity ward.

### 12.2.3. *Dodoma Region*

The former Central Region was split into two regions, Singida and Dodoma, on the 15th October, 1963. The Dodoma Region has hospitals at Dodoma (248 beds), Mpwapwa (50 beds), Kondoa (46 beds) and 20 beds at Kongwa bedded dispensary. There are medical officers in charge at Dodoma and Mpwapwa Hospitals, an assistant medical officer at Kondoa, and a medical assistant at Kongwa bedded dispensary. In the region there were 9,151 admissions to hospital and the average daily bed state was 463.5. Some 131,410 new cases attended out-patient departments and the total out-patient attendances was 294,856.



With the dividing of the region the regional medical officer's office was moved back to Dodoma Hospital from the boma. The wards remained busy at Dodoma, particularly the isolation ward where there were many smallpox admissions. There was no building activity at Dodoma Hospital.

The new hospital at Mpwapwa, the building of which was financed from British external aid funds, was opened by the Honourable Mr. S. A. Maswanya on 16th March, 1963. This is a standard 60-bed district hospital with an X-ray machine, whereas the old hospital at Mpwapwa had only 32 beds.

Kondoa has a very old hospital and it is hoped that it will be replaced in the near future. During the rains two wards collapsed and had to be abandoned. Temporary accommodation was obtained in the police office buildings for the patients who had to be evacuated from the collapsed wards.

Kongwa dispensary is now in the operating theatre of the old Overseas Food Corporation hospital. It is visited weekly by the district medical officer from Mpwapwa. This dispensary is not well sited as it is a considerable distance from Kongwa town and the local population is agitating to have a dispensary nearer the town.

#### 12.2.4. Iringa Region

In this region there are hospital facilities at Iringa (136 beds), Njombe (80 beds) and Malangali bedded dispensary (22 beds). There have been four medical officers at Iringa for most of the year and one at Njombe. There was a total of 7,502 admissions and the average daily bed state was 146.6.

In Iringa, as the beds in the new Grade I block were not being used to the full, a reallocation of beds was made as follows:—

- Two Grade I maternity beds;
- Two Grade I general beds;
- One Grade II general bed;
- Twenty Grade IV maternity beds; and
- Two Grade IV labour beds.

The moving of the Grade IV maternity beds into what had been the Grade I block allowed for 17 children's beds in the old Grade IV maternity ward. A total of 1,713 operations were performed, of which 506 were major.

At Njombe Hospital a new 26-bedded male ward and a new 13-bedded female ward were built. These two new wards have greatly helped to avoid congestion and cross infection and produced a much improved maternity department. The hospital continued to run a township dispensary in Njombe at considerable expense in terms of transport, manpower and drugs.

#### 12.2.5. Kigoma Region

There are Government hospital facilities at Kigoma (74 beds), Kibondo (62 beds) and at Kasulu (60 beds). There were 6,072 hospital admissions and the average daily bed state was 178.4. Medical officers were in charge of Kigoma and Kibondo Hospitals. An assistant medical officer ran Kasulu. There was no building activity in the region during 1963.

A busy out-patient dispensary at Ujiji under the care of an assistant medical officer was run from Kigoma Hospital. Attendances rose to about 500 a day.

Owing to the proximity of a large mission hospital the usage of beds at Kasulu was low compared with most other Government hospitals.

There was considerable strain on the beds at Kibondo owing to the abnormally high number of sleeping sickness admissions.

#### 12.2.6. Kilimanjaro Region

This region has Government hospital facilities at Moshi (259 beds), Kibongoto (256 tuberculosis beds) and Same (30 beds). There were 14,936 admissions to hospital and the average daily bed state was 548.78.

There were no structural changes at Mawenzi Hospital (Moshi); it was hoped to move the Grade I out-patients to Mawenzi and close Kibo Hospital down completely, but this was not possible and will have to wait until next year. It was an extremely busy year as is evident

from the fact that Mawenzi Hospital with 259 beds had an average daily bed state of 275.48. In the five years 1958 to 1963 out-patients were doubled from 128,595 to 267,435 and in the four years 1960 to 1963 inclusive confinements have risen from 1,292 to 1,863. Major operations performed have risen from 329 in 1953 to 1,063 in 1963.

From Kibongoto Hospital a tuberculosis survey of all new primary school children was carried out on the mountain. In September building was started on the junior staff quarters.

At the 30-bedded Same Hospital the average daily bed state was 41.9 and the total out-patient attendances rose from 39,031 to 60,537.

#### 12.2.7. *Mara Region*

This region has Government hospitals at Musoma (94 beds) and at Tarime (60 beds). A medical officer was in charge of Musoma Hospital and an assistant medical officer of Tarime Hospital. There were 4,545 hospital admissions and the average daily bed state was 105.77. There was no building activity during the year.

#### 12.2.8. *Mbeya Region*

Mbeya Region has Government hospitals at Mbeya (154 beds), Tukuyu (112 beds) and Kyela (60 beds). There were 12,525 hospital admissions during the year and the average daily bed state was 264.80. There was no building activity during 1963.

#### 12.2.9. *Morogoro Region*

This region has hospitals at Morogoro (184 beds), Kilosa (100 beds), Mahenge (74 beds) and Chazi (30 leprosy beds). There were 5,894 admissions to hospital and the average daily bed state was 287.1.

At Morogoro Hospital a new maternity ward was built by self-help, and was almost complete by the end of the year. The standard of dentistry was raised by posting an assistant dental officer to the dental clinic in February.

The 100-bedded Kilosa Hospital had a busy year with an average daily bed state of over 90. The maternity side was particularly busy and a request has been made for more beds.

Mahenge Hospital with 74 beds had a much quieter time with an average daily bed state of only 41.3.

While the Ministry of Health retained the responsibility for running the Chazi leprosy hospital, the management of the remainder of the leprosarium was handed over to a Management Board. The Board had its inaugural meeting on 18th April.

#### 12.2.10. *Mtwara Region*

This region has hospitals at Mtwara (59 beds), Lindi (103 beds), Nachingwea (103 beds), Kilwa (36 beds), Newala (50 beds) and Liwale (20 beds). There were 7,512 admissions and the average daily bed state was 318.1.

The new 86-bedded hospital to replace the present hospital at Mtwara was in the course of construction during the year. As there was an average daily bed state of 68.2 in the present 59-bedded unit it will be appreciated that the need for the new hospital is urgent.

Lindi and Nachingwea had more reasonable average daily bed states of 86.1 and 90.3 respectively. At Nachingwea 65 of the beds are allocated for the treatment of tuberculosis.

At Kilwa, construction was started of the new 60-bedded hospital which will replace the present unit.

#### 12.2.11. *Mwanza Region*

In this region there are Government hospitals at Mwanza (222 beds), Ukerewe (60 beds) and Geita (60 beds). Kwimba area comes under this region but it has no Government hospital. There were 11,973 admissions and an average daily bed state of 316.5.

Phase I of the projected new Mwanza Hospital was completed and opened in July as an out-patient department. This was most welcome as the old out-patient department had been extremely crowded. The bedded portion of the old hospital and the training school remained in operation.



#### 12.2.12. *Ruvuma Region*

This region has only one Government hospital, at Songea, with 47 beds. The Mbesa Hospital of 58 beds in the Tunduru area is run by the Christian Missions to Many Lands and is designated as a district hospital. There are also another 421 hospital beds in the region run by various missions. There was no building activity at the Government hospital at Songea which ran to capacity throughout the year.

#### 12.2.13. *Shinyanga Region*

This region has the following Government hospital facilities:—Shinyanga (80 beds), Maswa (60 beds) and Kahama (60 beds). All these hospitals have been under the care of medical officers throughout the year. There were 5,593 hospital admissions and the average daily bed state was 185·0.

Shinyanga Hospital has been fortunate in having available the services of the surgeon who is Chief Medical Officer of Mwadui Hospital at Williamsons Diamonds. He not only operated on cases at Mwadui Hospital which had been referred from Shinyanga, but he held surgical consultation sessions at Shinyanga Hospital every Tuesday afternoon. Shinyanga also makes use of the X-ray facilities at Mwadui.

Maswa Hospital buildings are relatively new, but a portion of Kahama Hospital is old and needs replacing. Money was provided to build key staff housing at the latter hospital, but owing to difficulties in obtaining land this project had to be temporarily abandoned.

#### 12.2.14. *Singida Region*

This region has Government hospital facilities at Singida (60 beds), Manyoni bedded dispensary (22 beds) and Itigi bedded dispensary (10 beds). There were 2,617 hospital admissions and the average daily bed state was 70·50. At Singida Hospital there was a 25 per cent increase in admissions and a 13 per cent increase in out-patients in 1963 compared with 1962.

#### 12.2.15. *Tabora Region*

In the Tabora Region there are Government hospitals at Tabora (208 beds), Nzega (100 beds), Mpanda (10 beds) and Sumbawanga (86 beds). There were 12,339 hospital admissions and the average daily bed state was 348·03. There were four medical officers at Tabora during the year and one each at Nzega and Sumbawanga. Mpanda was run by an assistant medical officer.

At Tabora the Grade III and IV beds were nearly always overcrowded, but the Grade I and II beds were not much in demand. Some 1,956 operations were performed.

At Nzega there was an average of about 100 deliveries a month.

There were no medical building activities in the region.

#### 12.2.16. *Tanga Region*

This region has hospital facilities at Tanga (410 beds), Muheza (106 beds), Pangani (26 beds), Handeni (58 beds), Lushoto (68 beds), and Korogwe (116 beds). Throughout the year there were medical officers in charge at each of these hospitals. The total admissions to hospitals were 16,643 and the average daily bed state was 611·38.

At Tanga Hospital building improvements had to be made to the X-ray department to house the superb new X-ray plant presented by the Federal Government of Germany. A new laboratory was built to accommodate the Bilharzia Chemotherapy Research Unit, and seven hospital beds were allocated to this unit for trials. The out-patient waiting accommodation was improved by a self-help scheme. The older Grade IV wards were considerably improved by redecoration. Twenty-five beds were made available for female tuberculosis patients in the Rodoussakis Ward which had previously accommodated only male patients. This ended the monopoly that Muheza Hospital had had in treating tuberculosis in women for the whole region.

Pangani Hospital was very busy with a daily average bed state of 26·17 for its 26 beds. Towards the end of the year work began on building a maternity ward by self-help.

With the re-arrangement of areas and regions Korogwe Hospital assumed the status of a district hospital.

At Lushoto a fine 13-bedded ward for female tuberculosis cases was built as a memorial to "Jamhuri". The money was raised by public subscription.

Throughout the year the region has been fortunate in having the services of a surgeon available and since the opening of the Bilharzia Research Unit the physician in charge of it has kindly made his services available.

#### 12.2.17. *West Lake Region*

This region has Government hospital facilities at Bukoba (110 beds), Biharamulo Hospital (42 beds) and a dispensary with 24 beds at Ngara).

Bukoba Hospital has had four medical officers on the staff for most of the year and Biharamulo has been under the care of an assistant medical officer.

There were 3,773 admissions to hospital and an average daily bed state of 145.59 in the region during 1963.

One medical officer at Bukoba obtained his Diploma in Ophthalmology and has been doing eye work in all regions round Lake Victoria.

At Biharamulo the pressure on hospital beds was mainly due to sleeping sickness.

There was no great building activity in the region.

### 13. THE MALARIA SERVICE

#### 13.1. GENERAL REVIEW OF THE YEAR

13.1.1. During 1963 the mosquito and malaria control programme in the larger settlements continued to be based on drainage and larviciding, anti-malaria oil containing D.D.T. being applied from knapsack sprayers or destruction of mosquito larvae being achieved by the use of B.H.C. powder distributed from rotary dustguns. The control of culicines breeding in peri-domestic waste water remained an important aspect of urban mosquito measures.

13.1.2. The Malaria Assistants and Orderlies in charge of these programmes became an integral part of the particular urban health office organization during the year, the Malaria Service assuming an advisory and technical rather than an executive relationship to them. Operations in the western and central parts of the country were inspected by Malaria Field Officers stationed respectively at Mwanza and Dodoma, while work elsewhere was visited from the laboratory at Morogoro by the Consultant Malariologist, an Entomologist who in October departed to become a Senior Lecturer at the new Dar es Salaam School of Medicine, and two Malaria Field Officers. This Entomologist had been occupied partly in the study of vectors of plague, and upon his transfer facilities and staff were provided by the Malaria Service for him to continue the work. The other Entomologist continued his investigation of the snail vectors of bilharzia, working throughout the year at the East African Institute for Medical Research in Mwanza.

13.1.3. In support of these mosquito and malaria control programmes and in preparation for eventual malaria eradication, trials of insecticides, of spraying equipment, and of anti-malarial drugs continued to form an important part of the work of the Malaria Service. Investigation of the efficacy of suppressive drugs among the semi-immune inhabitants of Tanganyika included continuation of the successful community-wide trial of chloroquinized salt at Mto wa Mbu, mapping of parasite resistance to pyrimethamine in the Tanga Region, tests that established the absence of parasite resistance to chloroquine and amodiaquine in Uzigua, injection of the new long-acting anti-malarial dihydrotriazine pamoate into infected people near Handeni, and surveys in preparation for a medicated salt project which it is anticipated will result in the eradication of malaria from Mafia Island. The trials are supported in part by grants from the World Health Organization.

13.1.4. The Consultant Malariologist and an Entomologist completed courses at London University, and a Malaria Field Officer attended a course at the W.H.O. Malaria Eradication Training School in Lagos. Both Entomologists enjoyed W.H.O. Travelling Fellowships studying bilharzia.

#### 13.2. TRAINING COURSES

13.2.1. The Malaria Service participated in the training of health staff at the Muhimbili Medical School, and provided refresher courses for Malaria Orderlies at Morogoro.



13.2.2. Four officers undertook overseas training courses during the year, as follows:—

- (a) Dr. D. F. Clyde, Faculty of Medicine, London University. The completion and award of D.Phil degree in Malaria (privately, January–July, 1963).
- (b) Mr. G. Webbe, W.H.O. Travelling Fellowship to North and South America and Egypt, studying bilharzia control methods (August–October, 1963).
- (c) Mr. A. S. Msangi, London School of Hygiene and Tropical Medicine. The completion and award of Diploma in Applied Parasitology and Entomology (Commonwealth Scholarship, January–July, 1963). Followed by W.H.O. Travelling Fellowship to Denmark, Switzerland and Egypt, studying bilharzia control methods (July, 1963).
- (d) Mr. H. C. Kingazi, W.H.O. Malaria Eradication Training School, Lagos. Study course in malaria eradication methods (September–December, 1963).

### 13.3. SCIENTIFIC PUBLICATIONS PRODUCED BY MEMBERS OF THE MALARIA SERVICE

CLYDE, D. F. AND MSANGI, A. S. (1963) "Malaria distribution in Tanganyika, Part II". *East African Medical Journal*, 40, 71.

CLYDE, D. F., MZOO, F. M. AND MLUBA, S. (1963) "Therapeutic trials of chloroquine silicate in Tanganyika". *Ibid*, in press.

CLYDE, D. F., MZOO, F. M. AND MLUBA, S. (1963) "Treatment of malaria with small daily doses of chloroquine hydroxynaphthoate or tennate". *Bulletin of the World Health Organization*, 28, 132.

WEBBE, G. (1963) "Known transmission patterns of *S. haematobium* in Tanganyika and the possible influence of irrigation on incidence of infection". *East African Medical Journal*, 40, 235.

### 13.4. ANTI-MOSQUITO MEASURES

The control of malaria in urban areas of Tanganyika has continued to depend upon measures directed towards the reduction of larval stages of mosquitoes, particularly the principal vectors *Anopheles gambiae* and *funestus*. These measures include drainage and larviciding, and are also effective against the prevalent nuisance mosquito, *Culex fatigans*, control of which is an essential part of the environmental sanitation of townships. During the year direction of the staff responsible for such work was transferred from the Malaria Service to the regional medical organization the Service remaining responsible for technical advice in connection with these anti-mosquito measures which also reduce the transmission of Bancroftian filariasis and some virus diseases.

#### 13.4.1. *Anopheline larvicidal measures*

Measures directed against anophelines carried out in towns, settlements and institutions continued to be based on drainage works and the use of a high-spreading malariol containing D.D.T. This larvicidal oil is applied to water surfaces by means of standard knapsack pressure sprayers, or in some circumstances by hand sprayers or mixed with sand, sawdust or rice husks. In situations where oil larvicides might be damaging to rice or to fish farming, a powder larvicide containing B.H.C. has been applied through a rotary dustgun. During 1963 these measures were carried out in the following towns and institutions:—

Regional capitals ...	...	Arusha, Bukoba, Dar es Salaam, Dodoma, Iringa, Kigoma, Mbeya, Morogoro, Moshi, Mtwara, Musoma, Mwanza, Shinyanga, Singida, Songea, Tabora, Tanga.
Other towns ...	...	Amani, Babati, Bagamoyo, Bukene, Butimba, Bwiru, Chunya, Geita, Handeni, Ifakara, Itigi, Kahama, Kasulu, Kilindoni, Kilosa, Kilwa, Kimamba, Kisarawe, Kondoa, Kongwa, Korogwe Old and New Towns, Kyela, Lindi, Mahenge, Malangali, Manyoni, Masasi, Maswa, Mbulu, Mikindani, Missungwi, Mnyusi, Mombo, Mpwapwa, Muheza, Nachingwea, Nansio, Ngudu, Nzega, Pangani, Pongwe, Tarime, Tukuyu, Tunduru, Ujiji, Urambo.
Institutions...	...	Airports:—Dar es Salaam (Ukongu), Mbeya, Tabora; Colito Barracks; Tengeru Training Centre; Ukiriguru Agricultural Station; Prisons: Tabora, Butimba and others.

### 13.4.2. *Anopheline* insecticidal measures

Spraying of houses with residually acting insecticides has been restricted to institutions such as prisons, hospitals and schools for purposes of general pest as well as mosquito control, in these circumstances B.H.C. being the insecticide generally used. Some suburbs of Dar es Salaam continued to receive house spraying with dieldrin, and B.H.C. has been used in buildings in the vicinity of the airport at Ukonga in accordance with international requirements.

### 13.4.3. *Culicine* control measures

An important aspect of environmental sanitation in towns has continued to be control of the nuisance mosquito *Culex fatigans*. Breeding taking place in pit latrines has been controlled by the routine application of diazinon emulsion or gas oil sprayed on so as to cover all liquid surfaces, while in domestic drainage systems diazinon emulsion has been recommended as the temporary method for destruction of culicine larvae pending repair of structural defects.

## 13.5. ANTI-MALARIA MEASURES

In preparation for a national malaria eradication campaign the following investigations have been made during the year into the suppressive activity of anti-malaria drugs, both on an individual and on a community-wide basis.

### 13.5.1. Medicated salt trial at Mto wa Mbu

Anti-malarial medicated salt, containing 0.3 per cent concentration of chloroquine in the form of the diphosphate coated with cetyl-stearyl alcohol to prevent leaching, continued to be the only form of salt supplied throughout the year to the inhabitants of Mto wa Mbu, where malaria was formerly holoendemic. The salt and drug were mixed in Arusha and dispatched in polythene-lined sacks by the single wholesaler to the shops at Mto wa Mbu, for sale at the commercial price of ordinary salt. Although the results have continued to be excellent, probably because the target dose of drug is in excess of the therapeutic requirements of the semi-immune population, a diminution by one-third in the proportion of chloroquine has been found in stored sacks. This is at present under chemical investigation.

Sporozoites remained apparently absent throughout the year, and the parasite rates in man were sufficiently low to indicate that transmission had ceased in Mto wa Mbu itself, the few infections still found being imported. In continuity with the pre-treatment and other parasite rates recorded in the report for 1962 (at page 16), during 1963 the rates have been as follows:—

Human age groups		Rates after 9 months use of medicated salt		Rates after 14 months use of medicated salt		Rates after 18 months use of medicated salt	
0-11 months	... ..	4.8	...	0.0	...	2.9	...
12-24 months	... ..	0.0	...	1.9	...	2.4	...
3-5 years	... ..	3.2	...	1.4	...	4.5	...
6-10 years	... ..	2.3	...	1.0	...	1.3	...
11-15 years	... ..	0.0	...	1.4	...	3.1	...
16 years and older	... ..	2.4	...	0.8	...	2.3	...

During the 18-month period of this investigation described in this and in the preceding report, a total of 10,284 kilograms of medicated salt was provided from four mixing sessions, the cost of labour and supervision being Shs. 2,000/-, of equipment Shs. 500/-, and of chloroquine premix delivered to the mixing point Shs. 9,000/-. From these figures the cost of protection for one year of each inhabitant of Mto wa Mbu is found to be Shs. 3/30. Expenses of technical assessment have not been included.

### 13.5.2. Pyrimethamine susceptibility testing in Tanga Region

Mapping of the distribution and intensity of resistance by *Plasmodium falciparum* to pyrimethamine has continued during the past ten years. For the 1963/64 series, the first provocative tests among primary school children were carried out in Uzigua, the percentage of parasites resistant to 25 or 75 mg. single doses of pyrimethamine being as follows:—

Place		To 25 but not 75 mg.		To 75 mg.		Sensitive to both doses	
Chanika	... ..	5	...	2	...	93	...
Sinden	... ..	0	...	5	...	95	...

Confirmation of resistance, as opposed to drug failure through other causes, was obtained in all the Chanika cases by further provocative testing.



### 13.5.3. *Chloroquine and amodiaquine susceptibility testing*

Occasional reports from outside Africa of malaria parasite resistance to chloroquine and amodiaquine (Camoquin) have stimulated suspicion on the part of some local practitioners that this problem is developing in Tanganyika. On the assumption that resistant parasites encountered in the original patient (who has almost invariably been discharged by the time the investigator is notified) are likely to have spread to some of his neighbours, reports of alleged resistance have been investigated in the community concerned by the use of the simple single-dose provocative test devised for pyrimethamine. In Uzigua, at Kideleko 150 mg. base doses of chloroquine and amodiaquine, administered respectively to 76 and 86 infected primary school children, cleared asexual parasitaemia, and at Kwamkono the same result was obtained among 51 and 43 children, a single amodiaquine failure here being attributable to vomiting of the dose. Because of the extreme importance of this problem, however, the investigation among clinical cases of allegedly 4-aminoquinoline resistant malaria at Kideleko continues.

### 13.5.4. *Long-acting injectable dihydrotriazine pamoate*

Towards the end of the year screening trials were undertaken of the new long-acting injectable compound dihydrotriazine pamoate (CI-501, or cycloguanil pamoate, related to proguanil). Since a single dose of this drug has been found to protect non-immune Americans for as long as nine months, its value in a malaria eradication campaign is apparent. At Kwabaya, near Handeni, semi-immune people have been given the single intramuscular injection, and the immediate and delayed effects on parasitaemia are being studied.

### 13.5.5. *Medicated salt project on Mafia Island*

The success of medicated salt at Mto wa Mbu makes it desirable to test the method on a larger scale. Mafia Island, with a population of 13,500, is sufficiently isolated for malaria eradication to be achieved and reinfection kept out thereafter; it is a place where the methods of eradication under holoendemic conditions, of consolidation and of surveillance may be perfected in preparation for the campaign on the mainland. During the year under review pre-treatment data were collected, and proposals made for the medication of all salt eaten on the island, for the direct treatment of infants who do not receive this salt in their diet, and for the possible use of residual spraying at a later stage.

## 13.6. BILHARZIA

The Entomologist at Mwanza, in association with the Bilharzia Team of the East African Institute for Medical Research and workers of the Ross Institute of Tropical Hygiene, continued during 1963 to investigate the ecology of snails and methods for their destruction. His work has included treatment with molluscicide of the Mironga River which flows through the centre of Mwanza and constitutes a serious public health hazard. The results of his investigations may be summarized as follows.

### 13.6.1. *Schistosoma mansonii transmission studies*

It has been shown that *Biomphalaria choanomphala*, present in Lake Victoria, is responsible for some degree of transmission of *Schistosoma mansoni* (report for 1961, page 23). Dredging operations and bottom sampling using an Ekman grab have proved impracticable for assessing the distribution and transmission potential of this snail. In order to estimate transmission potential in the body of the lake and in seasonal streams flowing into it, a biological method consisting of exposing white mice in floating cages has been used during 1963. Exposure of these mice at intervals of three weeks for a period of one hour is followed at the tenth week by autopsy, when the liver and mesentery are squashed and examined for schistosomes. The initial results of this method, associated with routine snail examination, suggests that the great bulk of lakeshore transmission comes from riverine *B. sudanica* shedding cercariae that are swept into the lake, and not from *B. choanomphala*.

### 13.6.2. *Laboratory tests of some new molluscicides*

Laboratory tests of various compounds for molluscicidal activity have been carried out using young and adult snails of *B. sudanica* and *Bulinus (Physopsis) nasutus*. Since ovicidal activity is a useful property, the molluscicides were also tested with snail eggs two to three



days old. Two organo-tin compounds proved to be slow-acting, but in toxicity to the snails compared favourably with Bayluscide. Ziram (zinc dimethyldithiocarbamate) in a concentration of 0.5 p.p.m. retarded and finally killed egg masses; but it was also noted that this compound at 5 p.p.m. was an effective mosquito larvicide against *Culex fatigans*, and at 0.5 p.p.m. against *Anopheles* larvae. Ziram being markedly diffusible is effective in waters having a high organic content, and since it is practically non-toxic to man and domestic animals it may prove to be a valuable dual purpose pesticide effective against bilharziasis and malaria. Two other compounds, Reglone and Gramoxone (bipyridylum herbicides, diquat and paraquat), at concentrations respectively of 1.5 and 2.0 p.p.m. killed all snails in the test; both are aquatic herbicides and being relatively non-toxic may prove useful in irrigation systems.

### 13.6.3. Application of molluscicide to the Mirona River, Mwanza

The seasonal fluctuation in numbers of *Biomphalaria sudanica* and of the associated *S. mansoni* infection rate had already been studied in the Mirona River (report for 1962, page 17), the results suggesting that this serious hazard to the health of the Mwanza townspeople might best be reduced by application of molluscicide during the interval between the November/December and the March/May rainy seasons. At this time sufficient water flows to ensure penetration of the chemical into the pools and swampy margins of the river, and the great increase in snail numbers occurring annually at the end of the latter rains would be likely to be aborted.

Supported on planks crossing the Mirona River 3,500 yards above its outfall, the apparatus used for dispensing the molluscicide had been designed so that paddles in the container, continually moved by a propeller turning in the stream current, agitated the 4 per cent suspension of Bayluscide (70 per cent wettable powder). It was considered necessary to maintain in the river a concentration/time product of 8 parts per million hours. The efficacy of the method was established by recovery only of dead snails from the river, and it appeared that the established snail population was destroyed. Five weeks after treatment, the snail population was only 10.7 per cent of the pre-treatment figure, but at ten weeks that figure had again been reached.

A second application at the same dosage, but at a distance of 4,800 yards above the outfall, was made in May at the end of the major rains. Twenty-four hours after this application many dead but no live snails were recovered in the treatment area. Re-establishment of a large *Biomphalaria* population was delayed much longer than after the first application, probably because the point of treatment had been moved upstream. This delay was the more remarkable since slowing of flow in the main river, and seepage influx in its lower course, had diluted the concentration of molluscicide to 0.3 p.p.m. A period of 19 weeks elapsed before *Biomphalaria* were recorded, and the upsurge in snail numbers expected from July to September did not occur.

From the results of this trial it is estimated that control of transmission of *S. mansoni* in the Mirona River, where it runs through Mwanza township to Lake Victoria, can be achieved by three chemical treatments a year, the cost being Shs. 3,000/-.

## 14. THE DENTAL SERVICE

14.1. The dental laboratory at the Dental Unit was extended to accommodate additional workshop apparatus. A lecture room for dental technician students was also established.

14.2. Equipment was installed in the dental surgeries at Mwanza and Tabora and work commenced on surgeries at Moshi and Morogoro.

14.3. Early in the year four more dental assistants completed satisfactorily the up-grading course and were promoted to the rank of assistant dental officer. Later in the year two more dental assistants were promoted after a period of referral. The last course of training finished in August, 1963 and four additional dental assistants qualified for promotion and were subsequently promoted. There are now in the country thirteen assistant dental officers. Their supervision has given some cause for anxiety and will remain somewhat unsatisfactory until it is possible to appoint regional dental officers. Nevertheless, they perform most valuable work in this period of transition.

14.4. The training of dental technicians is progressing satisfactorily; four passed the intermediate examination in dental technology of the City and Guilds in May and two new students were accepted in July.



## 15. THE SLEEPING SICKNESS SERVICE

15.1. The Regional Medical Officer, Tabora, continued in his capacity of Sleeping Sickness Adviser throughout 1963, and was assisted by an Assistant Medical Officer. Supervision of population movement, an essential aspect of the control of sleeping sickness, became increasingly difficult because of the shortage of Settlement Officers. This, together with insufficient funds for the clearance of bush, is partly blamed for the increase in incidence of the disease, but natural factors manifested by cyclical frequency of human trypanosomiasis over a number of years may also have contributed.

15.2. Although the number of cases increased this year compared with 1962, the incidence remained lower than in each of the years 1959–1961. The reported incidence during the past five years is as follows:—

			1959		1960		1961		1962		1963
New Cases	...	...	827	...	825	...	765	...	355	...	510
Deaths	...	...	84	...	88	...	74	...	33	...	64
Mortality per cent	...	...	10.1	...	10.6	...	9.7	...	9.3	...	12.5

The increase in the mortality rate, which has been declining since the introduction of Mel.B. therapy, is attributed to an increased number of cases reporting late for treatment. Some deaths among known patients have occurred in their houses, and may have been from other diseases.

15.3. Because of reorganization of the regions, it is necessary to record the distribution of sleeping sickness on a district basis in order to facilitate comparison with previous years. In the *Tabora Region*, the following incidence has been reported:—

	District		1959		1960		1961		1962		1963
Tabora	...	...	58	...	68	...	32	...	24	...	10
Mpanda	...	...	32	...	59	...	45	...	38	...	15
Sumbawanga (Ufipa)	...	...	1	...	6	...	3	...	0	...	27

Most of the cases in Tabora District were infected in the north-west part, around Ichemba, Ulyankulu, Urambo and Uyowa. The areas of infection in Mpanda District are scattered along the Ukumbi-Kabungu forests in the north, and south-east of Mpanda settlement, and fishermen, hunters and honey collectors as usual predominated among the victims. In the Sumbawanga District a new outbreak occurred in the Kirando area on the shores of Lake Tanganyika, the cause being the movement inland of people whose lake shore villages were flooded by the great rise in the lake level. This outbreak, which had probably started towards the end of the previous year, diminished sharply after March, 1963, and all the cases were evacuated to the district hospitals at Sumbawanga or Tabora for treatment. The Tsetse Department commenced bush clearing and spraying in the area, but plans for moving the people at risk into the safe settlements were not implemented during the year owing to shortage of staff.

15.4. The *Kigoma Region* contributed the greatest number of cases in 1963, the increase in Kibondo District being very marked. In this district a flare-up of infections starting in January around Nyaviumbu, Kibondo and Kifura resulted in many cases occurring particularly among honey collectors visiting the fly-infested bush around Nyaviumbu. The endemic areas in the Kigoma and Kasulu Districts remained unchanged, although no cases were reported from Kagunga where previously *T. gambiense* occurred.

	District		1959		1960		1961		1962		1963
Kigoma	...	...	41	...	21	...	19	...	13	...	6
Kasulu	...	...	155	...	96	...	82	...	56	...	21
Kibondo	...	...	33	...	61	...	191	...	32	...	141

15.5. In the *Shinyanga Region* (Kahama District) and the *Mwanza Region* (Geita) cases were few. Those diagnosed at hospitals in the Geita District had been infected elsewhere, in Biharamulo, Kibondo, Kahama and Kasulu Districts.

	District		1959		1960		1961		1962		1963
Kahama	...	...	31	...	23	...	16	...	6	...	6
Geita	...	...	11	...	3	...	2	...	2	...	5

15.6. The *West Lake Region* showed little increase in incidence in 1963. Most of the cases seen at Biharamulo were infected near the lake shore around Buzirayombo, where the settlement of immigrant Wasukuma has not been controlled. The single case at Bukoba was infected in Karagwe, where transmission continued in the Nyabionza area, and the patient treated at Ngara had probably imported his infection from Rwanda or Burundi.

District	1959	1960	1961	1962	1963
Biharamulo ... ..	102	53	72	43	59
Ngara ... ..	85	216	54	14	1
Bukoba ... ..	5	0	1	1	1
Karagwe ... ..	64	36	57	6	6

15.7. The *Arusha Region* was second only to Kigoma in the number of cases of sleeping sickness reported during the year. The cases seen in the Arusha District were contracted in Monduli and Mbulu Districts. In the former, cases came from Kitete and Mto wa Mbu, but a survey later in the year revealed no further infections. In the Mbulu District many of the cases were in women and children, the infections being contracted near homes particularly below the Rift Wall farms, from Umbugwe in the north to Babati in the south and east of Magugu. A majority of cases came from Kiongozi on the Great North Road, the peak of incidence being March, although the outbreak persisted throughout the year. Vigorous measures of case detecting and bush clearing were taken.

District	1959	1960	1961	1962	1963
Arusha ... ..	0	1	1	0	2
Mbulu ... ..	49	20	49	55	126
Monduli (Masai) ... ..	0	1	3	3	18

15.8. In the *Morogoro Region* the only pocket of endemicity is at Kilosa kwa Mpepo in the south-west of the Ulanga (Mahenge) District. A rise in the reported incidence of sleeping sickness coincided with worsened communications and accessibility of the area.

District	1959	1960	1961	1962	1963
Ulanga (Mahenge) ... ..	31	70	30	16	41

15.9. In the *Mtwara Region* (Nachingwea, Masasi and Lindi Districts) and the *Ruvuma Region* (Tunduru) a decrease in case incidence was reported, as follows:—

District	1959	1960	1961	1962	1963
Nachingwea ... ..	78	73	77	32	19
Masasi ... ..	2	1	0	2	1
Lindi ... ..	0	0	2	0	1
Tunduru ... ..	18	13	19	8	4

15.10. A suspected focus in Ngwalla area of Chunya District, in which a case had been diagnosed four years ago, proved negative following a blood slide survey. No sleeping sickness cases have been reported in the Singida, Dodoma, Mara, Kilimanjaro, Iringa, Tanga, Coast and Mbeya Regions.

## 16. THE PSYCHIATRIC SERVICES

16.1. The number of patients remaining in Mirembe Hospital on 30th November, 1963 was 867, an increase of 123 over the number remaining in hospital at the end of 1962. In Isanga the corresponding number was 267, an increase of ten over the number remaining in that institution at the end of 1962.

16.2. During the year 898 patients were admitted to Mirembe, an increase of 331 over the previous year. Of these 648 were admitted under certificate, 63 voluntarily, 186 under observation and one under temporary order. Although the percentage of patients admitted voluntarily remains far below that we would wish to achieve, there has been a considerable increase of this category and of cases under observation as compared with the previous year.



The number of patients discharged from Mirembe also increased during the year and was 686 as compared with 500 during the previous year. This increase in the number of patients discharged is unfortunately partially owing to patients discharged prematurely because of over-crowding in the hospital.

16.3. The general health of long-term patients in both Mirembe and Isanga throughout the year has remained good. There were five deaths as compared with eleven in the previous year.

16.4. No new buildings were erected during 1963.

16.5. As in the past electro-convulsive therapy, the tranquillizing drugs and occupational therapy have been the main instruments of treatment. Electro-convulsive therapy is a very major part of the treatment as it is a potent weapon, not only in treating depressive and manic states, but is most valuable in the management of "bewitchment".

## 17. THE PATHOLOGY LABORATORY SERVICE

17.1. A detailed report of the services is recorded in the Annual Report of the Central Pathology Laboratory, Dar es Salaam. A summary of some of the main points is described below.

17.2. Progress in the gradual expansion of the laboratory staff was reversed during the year owing to a number of resignations and transfer of technicians, student technicians and laboratory auxiliaries. The advantages of higher A.I.M.L.T. training, however, did much to mitigate the reduction in the now all-African technical staff and for the first time each of the four departments of bacteriology, haematology, biochemistry and histopathology was staffed by a senior technologist, A.I.M.L.T. qualified in his respective technical discipline.

17.3. Despite shortage of pathologist staff, there was a general expansion in all branches of clinical pathology. Special investigations by the pathologists numbered 5,614 of which 1,133 were from mission hospitals.

17.4. In the general bacteriology section a quantitative urine culture technique was introduced and was found useful in distinguishing infection from contaminants.

17.5. In the bacteriology of tuberculosis section, aid was given by W.H.O. in the form of expert advice and by U.N.I.C.E.F., in the form of certain equipment. This section also took part in the M.R.C./East African Tuberculosis Therapeutic Trials known as the Thiacetazone Investigation (Part II).

17.6. The general serology section saw the introduction of a new serological pregnancy diagnosis test which replaced the *Xenopus laevis* toad test.

17.7. In the section dealing with the serological tests for syphilis (yaws) the steady decline in positivity of the maternity clinic sera continued. The positivity rate of the P.P.R. test in this group of the Dar es Salaam population was 18 per cent in 1956 and has now dropped to 6 per cent. The significance of this dramatic decline in serological positivity is not understood.

17.8. In the virology section the work was confined to routine smallpox diagnosis and tissue culture work was abandoned owing to staff shortage.

17.9. Heavy demands were made on the haematology and transfusion serology department, which is situated in the Muhimbili Hospital laboratory. Demands for blood transfusion were also heavier than in previous years, amounting to 1,776 donor bottles.

17.10. In the biochemistry department greatly increased demands in respect of liver function tests were a feature. These number 650 and are analysed in the Annual Report.

17.11. Of great interest and importance is the work done in the department of morbid anatomy and histopathology. Surgical biopsies from 3,519 patients were examined, compared with 3,226 in 1962. The findings from these studies are analysed in detail in the Annual Report. Malignant neoplasms in African biopsies numbered 822. These are also analysed according to sex and also separately in the case of children. As in previous years half the malignant neoplasms of children proved to be the lymphosarcoma of Burkitt.

17.12. Of the chronic inflammatory granulomas disclosed by histopathology, mention must be made of a case of cutaneous leishmaniasis in a young adult female African who had been treated for leprosy. This is the first such case recorded in Tanganyika.

17.13. Other work of the laboratory division detailed in the Annual Report includes the clinical post-mortems at Muhimbili Hospital, the important technology carried out in the regional laboratories, training of technical staff, the storage and issues of viable and labile vaccines and sera, and public health bacteriology.



## 18. THE LEPROSY SERVICE

18.1. The principal events of the year were the opening in July of the Swedish-Norwegian Save the Children leprosy hospital in Bukoba, and the opening in September of the Hombolo Leprosarium (Diocese of Central Tanganyika, Church Missionary Society) in the Dodoma District.

18.1.1. Adjacent to the new leprosy hospital in Bukoba, to which 77 patients were admitted from its opening to the end of the year, the Save the Children organization has built a rural medical aid training centre. The hospital functions as the centre of a widespread network of 78 clinics maintained by central and local Government and voluntary agencies, and visited by a team of three doctors and three nursing sisters. By the end of the year the total number of registered cases was 2,920 (in a population of 630,000), and although attendance varied from 50 to 75 per cent, the introduction of home visiting is resulting in an improvement.

18.1.2. The Hombolo Leprosarium, which replaces the old institution at Makutupora, has been planned as a centre for the control of leprosy in the Dodoma Region. Built with the financial help of the Mission to Lepers, the hospital has a 36-bedded ward unit together with dormitories and has been designed to accommodate about 150 patients.

### 18.2. THE GOVERNMENT LEPROSARIA

At the Government leprosaria at Makete, in Rungwe District, and Chazi, Boards of Management were appointed during the year to assume responsibility for all non-medical activities, including supervision of agricultural projects, and improvement of patients' housing and welfare.

18.2.1. At Makete, the appointment of an Assistant Medical Officer during the year met a long-standing deficiency. An intensive course of instruction and clinical demonstration held at the leprosarium was attended by a doctor, several nursing sisters and rural medical aids from voluntary agencies in the Mbeya Region. The leprosarium continued to be very busy, admitting new patients to the number of 144 from all districts in the Mbeya and Iringa Regions. The total number of patients receiving treatment in the Rungwe District, including those at Makete, during the year was 1,995, an increase of 61 per cent over 1962.

18.2.2. At Chazi, administrative difficulties have been overcome to a large extent through the devoted energy of the BELRA field officer. The complications of leprosy have continued to demand full utilization of the available hospital beds, and several patients with associated pulmonary tuberculosis have required long term hospitalisation. There has been an increase in short term admissions, especially in respect of patients referred from local authority dispensaries. However, as in the past, the majority of patients admitted to Chazi consisted of self-reporting cases.

18.3. Elsewhere in Tanganyika, an increasing activity was reported in the treatment and control of leprosy at clinics and hospitals. In the *Coast Region*, 123 patients were cared for at the Rufiji District Council's Kindwitwi leper camp, and 30 at Nunge camp in Mzizima District, run by the Ministry of Home Affairs. No increase in cases was reported at the Infectious Diseases Clinic of the Muhimbili Hospital, but many patients were treated elsewhere on an out-patient basis. On Mafia Island, for example, among 38 registered cases 18 attended regularly for treatment. In the *Tanga Region*, in addition to the 69 cases residing at the Government leprosy village of Mtindiro, voluntary agency centres in the Usambara area cared for many patients. At one such centre on the Kitivo plains the registration of 580 cases, of which 80 per cent were tuberculoid, and evidence of many more have given rise to anxiety. In the *Shinyanga Region*, 62 beds for leprosy cases were provided at Kola Kondo attached to the Kola Ndoto Hospital, and Busanda Mission looked after a further 57 cases in its own neighbourhood. In the *Singida Region* at the leprosarium maintained by Iambi Mission Hospital, the number of resident patients during the year was 477, and 103 were discharged following treatment. A noted visitor to this institution was Dr. O. Hasselblad, President of American Leprosy Mission Inc., who arrived by air, landing on an airstrip prepared by the patients. In the *Tabora Region*, the Moravian Mission Leprosarium at Sikonge accommodated between 400 and 500 patients during 1963, one supposed nodular case from Nzega proving on biopsy to be afflicted with cutaneous leishmaniasis. In the *Kilimanjaro Region* the incidence of leprosy remained low, the few cases detected being mostly among immigrants from the central and western parts of Tanganyika. In other regions arrangements for the treatment of in-patients and out-patients continued much as in previous years.



18.4. With regard to the epidemiology of leprosy in Tanganyika, it has become apparent that appropriate control measures, well maintained over a period of five to ten years, result in a decline in the prevalence of the disease. This effect has been particularly noticeable in the Ntebela area of Rungwe District where the extensive out-patient service, supervised from Makete Leprosarium and actively supported by the local authority, has had a defaulter rate not exceeding ten per cent. On the other hand, an increase of population by migration into an area may lead to a disproportionate increase in leprosy prevalence in that area. This has occurred at Turiani, a few miles from Chazi, where there has recently been extensive settlement in the alluvial Wami plain. The settlers include Wamakonde and Wagogo, and these two tribes during 1963 accounted for 10 per cent of cases in the Turiani area whilst comprising no more than one per cent of the population.

## 19. THE TUBERCULOSIS SERVICE

19.1. Since the period covered by the detailed review of the Tuberculosis Service appearing in the report of this Ministry for 1962, progress has largely been in the field of consolidation of the various regional services. Some of these services now provide co-ordinated care extending into two or more of the 17 newly-designated regions, while others, for example that in the Coast Region centered upon Dar es Salaam, have a more limited scope. Those few remaining areas where the care of patients suffering from tuberculosis remains the responsibility of the local hospital or dispensary are situated in the Tabora, Kigoma, Morogoro, Mbeya and Iringa Regions, and in the last three there already exist hospitals with specialized facilities for diagnosis and treatment of the disease. In a state of transition, with a centralised service in the process of being established based on Mwanza, are the Mwanza, Shinyanga, Musoma and West Lake (Bukoba) Regions, adjacent to Lake Victoria.

### 19.2. THE TUBERCULOSIS SERVICE IN THE COAST REGION

19.2.1. The service in the Coast Region is administered by a regional tuberculosis officer, and is centred on the in-patient facilities provided at the Muhimbili Hospital, other hospitals in the region making beds available only on an emergency basis for seriously ill patients awaiting evacuation. Admissions for pulmonary tuberculosis during 1963 at the Muhimbili Hospital were 842 compared with 751 the previous year, and discharges 788 compared with 684. The number of deaths during 1963 was 54, 21 more than in the preceding year. Although the number of beds remained the same, a more rapid turn-over in admissions took place this year. Through the Infectious Diseases out-patient clinics the total number of new cases diagnosed during 1963 was 910, an increase on the previous year, and 7,661 sputum examinations were made, of which 512 (6.7 per cent) were found positive for acid-fast bacilli. Total attendances by tuberculosis out-patients numbered 93,459, an increase by one-third over 1962. This further rise in out-patient attendances, accompanied by a decrease in the absconder rate, was attributed partly to the use of streptomycin in many cases.

19.2.2. In July, when the newly-established Coast regional tuberculosis office opened in the Infectious Diseases Clinic, it became possible to establish out-patient treatment centres throughout the region. This was done at 25 places outside Dar es Salaam. Although the district councils had agreed to employ eight tuberculosis home visitors, and accepted responsibility for the purchase of B.C.G. vaccine, these essentials had not materialised by the end of the year: outside Dar es Salaam the only B.C.G. campaigns undertaken in the region were among students of the Pugu and Minaki Secondary Schools at the request of the headmasters. Within Dar es Salaam the service provided by the City Council improved with the employment, unfortunately for only a short period, of a full time tuberculosis home visitor. The Dar es Salaam Association for the Prevention of Tuberculosis continued to provide its free meal service throughout the year, thus encouraging attendance.

### 19.3. THE TUBERCULOSIS SERVICE IN THE TANGA REGION

19.3.1. The Tanga regional tuberculosis scheme was improved during 1963 by the addition at Lushoto of the Jamhuri Memorial Ward for female patients, and the provision at Tanga of 25 beds for females in the Rodoussakis Ward. Some beds for males were also added to the facilities at Muheza Hospital. With these additions, at the end of the year the number of beds for the treatment of tuberculosis amounted to 50 in the Rodoussakis Ward, Tanga, 36 at the Infectious Diseases Hospital, Tanga, 46 at Muheza Government Hospital, 24 at the Government hospital at Korogwe, 34 in the Government hospital at Lushoto, and 20 in the Lutheran Hospital, Bumbuli. The seven infectious disease beds at Handeni Government



Hospital are generally kept filled with tuberculosis patients awaiting transfer, and because of its facilities for radiography this hospital serves as a centre for case reviewing. During the year there were 709 new cases of tuberculosis admitted to the Government hospitals in the region, compared with about 800 in 1962. Deaths either in hospital or at home were reported as numbering 119, but undoubtedly more occurred. The only voluntary agency hospital participating in the regional scheme has been that at Bumbuli, with between 15 and 20 in-patients.

19.3.2. Out-patient treatment and case reviewing has been carried out in many medical units in the region. During the year nearly 1,500 patients attended regularly, the defaulting rate being 20 per cent. There has been an increase of some 400 patients since the previous year. Shortage of tuberculosis home visitors, particularly those that should be employed by the local authorities, has made it necessary for dispensary staff to maintain home visiting. An average of 70 out-patients regularly attended at the Bumbuli Hospital clinics. Preventive work included B.C.G. vaccination of children, following Heaf testing when practicable, in various parts of the region, and Heaf tests began to be performed routinely during the year on all admissions to the paediatric ward at Tanga Hospital. With the assistance of contributions from local authorities, B.C.G. vaccinations were carried out to the number of 4,000 in schools at Lushoto and 500 among children attending clinics in Tanga municipality.

#### 19.4. THE TUBERCULOSIS SERVICE IN CENTRAL TANGANYIKA

19.4.1. The service covering the central part of Tanganyika, now divided into the Dodoma and Singida Regions, has continued to be based on Dodoma where the 84 designated beds were filled to capacity throughout the year. A total of 330 patients was admitted, 41 more than in the previous year; 284 were discharged, 20 absconded, and 28 died, the latter generally being new patients with advanced disease or old defaulters readmitted moribund. Progress of the disease may have been accelerated in some patients by the famine and consequent malnutrition persisting into the beginning of the year. An attempt to apportion the available beds more evenly between the various districts served was successful, by the end of the year the number of patients from the more remote Singida Region being equal to that from the surrounding Dodoma District. Patients from the Kondoa and Manyoni Districts were also admitted in numbers, but none from Mpwapwa.

19.4.2. The Dodoma Hospital has been supported throughout the year by out-patient clinics in the different districts. Cases attending in the Dodoma Region were referred for thorough examination to the Dodoma Hospital, while those in the Singida Region travelled to Singida to be seen by the regional tuberculosis officer in the course of his frequent visits from Dodoma. The rate of defaulting was high at these clinics, as much as 50 per cent among Wagogo, but less at Singida and Kondoa; the long and difficult journeys sometimes facing patients were partly responsible.

#### 19.5. THE TUBERCULOSIS SERVICE IN NORTHERN TANGANYIKA

19.5.1. The service covering the northern parts of the country has continued to be centred upon Kibongoto Hospital, although to the south-west of the area additional beds have been provided for patients having tuberculosis. Patients requiring hospital admission from the Kilimanjaro, Pare and Arusha Districts have been cleared to Kibongoto, while Monduli Hospital provided ten beds, Mbulu 30, Oldeani 14, voluntary agency hospitals eight and 30 more beds have been proposed. During the year 178 new cases were diagnosed at Arusha and 582 at Mbulu, but the rate of increase of the disease has been slower than formerly.

19.5.2. The incidence of tuberculosis in the Kilimanjaro District has diminished steadily, there being a fall in the number of new cases of eight per cent over the preceding year. This decrease was also apparent from the results of two surveys carried out in 1963, the first among primary school entrants mostly aged 5-6 years, and the second conducted by the Nordic Mobile Unit among adults. Among 10,636 children tested, 631 positive reactors were found, this proportion of 5.9 per cent being considerably lower than the ten per cent reactor rate found in the Mashati-Usseri area in 1956. Among 9,595 adults examined by mass radiography, the total number of active cases proved to be only eight. It will be recalled that the incidence of tuberculosis on Kilimanjaro in 1927 was eleven per thousand. In the Pare District the position remained unchanged, 35 cases being admitted for treatment during the year.



## 19.6. THE TUBERCULOSIS SERVICE IN SOUTHERN TANGANYIKA

19.6.1. The service in what was formerly the Southern Region, now divided into the Ruvuma and the Mtwara Regions, is composed of two sections which fit into the new administrative boundaries. In the Ruvuma Region, Peramiho Hospital with its 60-bedded tuberculosis wards continued to form a nucleus, a certain number of cases also being treated at the voluntary agency hospitals at Liuli and Mbesa. In the Mtwara Region, the service was run for the first half of the year by a regional tuberculosis officer and subsequently by the district medical officer based on Nachingwea Hospital, which contained 65 beds for the treatment of tuberculosis. With Ndanda Hospital containing 70 such beds, and smaller numbers in voluntary agency and Government hospitals, including six made available during the year at Liwale, a total of 273 beds has been provided in the Mtwara Region. Nevertheless, pressure on these beds continued to be heavy, 868 new cases being admitted during 1963 and 106 readmitted. Deaths were notified to the number of 69, and defaulters numbered 168. The principal administrative problems that occurred were shortage of facilities at Kilwa, and the recurrent difficulty of transportation of patients to re-assessment centres. During the last three months of the year sputum from all new cases admitted to Nachingwea Hospital was despatched for isoniazid sensitivity testing, while long-standing cases were tested for sensitivity to all drugs.

19.6.2. During 1963, 1,682 out-patients were seen at 65 treatment centres in the Mtwara Region, the principal weakness in this system remaining the Kilwa District. Vaccination with B.C.G. purchased by the local councils was carried out among children in the Lindi, Nachingwea and Masasi Districts.

## 19.7. THE TUBERCULOSIS SERVICE IN THE LAKE VICTORIA AREA

19.7.1. A comprehensive service centred on Mwanza and covering the Mwanza, Musoma, Shinyanga and West Lake (Bukoba) Regions has been under development by the Tanganyika Episcopal Council under the auspices of "Misereor" of Germany since 1961, when training of rural health orderlies in preventive work and house visiting commenced. Considerable co-operation has been forthcoming from the local authorities, who have accepted financial responsibility not only for the orderlies, but also for provision of B.C.G. As a result, during the year most of the school children in Mwanza were vaccinated, and some 40,000 children, negative reactors, have been similarly treated by Sumve Hospital staff in Kwimba District this year and last. The appointment to Mwanza of a regional tuberculosis officer has accelerated the programme. On the basis of his surveys of the four regions covered by the proposed service, plans were made during 1963 to provide 18 treatment centres distributed throughout the area.

19.7.2. In the Shinyanga Region preparations were made during the year to adapt existing facilities to the proposed service. At Shinyanga 42 new cases were seen, at Kahama 91 and at Maswa 92.

## 19.8. OTHER AREAS

19.8.1. In the Tabora and Kigoma Regions no centralised tuberculosis service has yet been introduced, although care and treatment of cases has continued to be carried out at local hospitals and dispensaries. In the Tabora Region there were 18 beds available at Tabora, eight at Nzega, and eight at Sumbawanga, all in isolation wards of the general hospitals. During the year 86 in-patients were treated at Tabora, while the out-patient department reported 64 new attendances.

19.8.2. In the Morogoro Region, although no formal service has been instituted, care of patients suffering from tuberculosis has continued to be active in the general hospitals and dispensaries. The nucleus of a unified regional service was created during 1963, with the opening of a 100-bedded tuberculosis block at the Capuchin Hospital in Ifakara.

19.8.3. In the former Southern Highlands Region, treatment has also continued to be on a local basis. In the new Iringa Region, there were four beds available at Iringa and eight at Njombe, the latter district also being served by the Roman Catholic mission hospital at Lugarawa with 51 beds devoted to cases of tuberculosis. In this new region a unified scheme was started during the year, but progress was slow. Iringa reported 127 new cases, and Njombe 45. In the Mbeya Region the Southern Baptist mission hospital, established for the treatment of tuberculosis, continued to function throughout the year.



## 19.9. TUBERCULOSIS TREATMENT TRIALS

During 1963 the series of trials of drugs used in the treatment of tuberculosis continued under the direction of the British Medical Research Council. The target of 50 patients at each of the participating hospitals, required for proper evaluation in the East African Thiace-tazone Investigations, has been met.

## 20. CENTRAL MEDICAL STORES

20.1. For the first time supplies were issued to a value in excess of £400,000. This figure would have been higher apart from the fact that in some instances the quantity demanded could not be met in full from the stocks held and in others orders were placed with local suppliers. There is an increasing tendency to use local suppliers, thus avoiding having capital tied up in stock holding.

20.2. Owing to the running down of stocks in the previous year an extra £36,000 was allocated in February to boost the stock position. However, by 1st July the value of stock held had dropped to £99,000 and by October to £83,000, so a request has been made for a further £65,000 to boost the stock to a position where it would be likely to weather such eventualities as a shipping strike or major epidemic outbreak. Ideally five months' stock should be held so that with a turnover of £400,000 some £165,000 worth of stock should be in the store.

20.3. The local purchase of drugs by individual hospitals was becoming an increasing problem. Consequently, from July, all purchases of drugs had to be paid for from the Purchase of Stores vote which was held by Medical Stores. This not only cut down the indiscriminate purchase of drugs locally by individual hospitals, but also ensured that the prices charged were reasonable. Only very urgently required drugs may be purchased now and then not to a value in excess of Shs. 100/-. The introduction of this system caused some difficulties in the case of the larger hospitals at first, but is now running smoothly.

20.4. Although there have been some staffing difficulties the Stores has managed to run efficiently and the Accounts Section no longer falls into arrears.

20.5. The regional medical officers are unanimous that the co-operation of Central Medical Stores has been excellent throughout the year. Delays, when they have occurred, have been due to transport difficulties.

## 21. REPORTS OF THE CLINICAL CONSULTANTS

21.1.1. The number of specialist firms at Muhimbili was increased at the beginning of the year by the establishment of a third medical unit and towards the end of the year by the appointment and the posting of a third consultant surgeon.

21.1.2. There was a great increase in the number of patients seen by the consultants, both in the case of out-patients and in the case of in-patients admitted under their care.

21.2. The year 1963 saw the re-establishment of a properly staffed ophthalmic unit. This unit was established under a Technical Assistance agreement between this Government and the Government of Israel. While the Dar es Salaam unit is headed by a consultant from Israel a local medical officer started his training as an ophthalmologist at the Hadassah Hospital. During the year a total of 20,419 out-patients attended the ophthalmic department, of whom 6,199 were cases seen for the first time; 363 patients were admitted to the wards and 534 ophthalmic operations were performed by the staff of the unit.

21.3.1. The year saw a welcome increase in the teaching activity of the paediatric unit and particular mention is made of the training of assistant medical officers in this discipline.

21.3.2. A new visitor to the paediatric wards was the health nurse who attended once a week and assisted in the health education of mothers in residence with their children. Topics discussed ranged from malnutrition and the importance of breast feeding to accident prevention in children. The health visitor was much encouraged by the great interest shown by mothers in topics relating to the welfare of their children.

21.3.3. In May, 1963 a U.N.I.C.E.F. seminar was held in Dar es Salaam the subject discussed being "Practical problems of Obstetrics and the Newly-born in East Africa". This U.N.I.C.E.F.-assisted seminar was organized jointly by the Tanganyika Ministry of Health and Makerere Medical School. In December a Working Party on "Standards of Maternal and Child Health Care in East Africa" met in Makerere College, Kampala, and was attended by a representative of this Ministry.

21.4.1. The number of consultant physicians was increased early in the year by the secondment of a consultant physician from the London School of Tropical Medicine. During the year he carried out research work, assisted in medical teaching and took part in the clinical activities of the hospital.

21.4.2. There has been heavy pressure on the beds at Muhimbili, particularly in the case of the female medical wards.

21.5.1. The consultant anaesthetist reports an improvement in the staff situation at Muhimbili Hospital during 1963. Early in the year a medical officer returned from Denmark where he obtained a Diploma in Anaesthetics. The staff throughout the major part of the year consisted of a consultant anaesthetist, two graded anaesthetists and one assistant medical officer.

21.5.2. The consultant anaesthetist conducted two courses of lectures to students during the year and it was possible to illustrate these with slides made in the newly established section of clinical photography. The inauguration of this section has been entirely due to the enterprise and enthusiasm of the consultant anaesthetist.

21.6.1. Mention has already been made of the establishment of a third surgical firm at Muhimbili towards the end of the year. As was the case in all other departments, the number of patients attending the consultant surgical clinics continued to rise, the total during the year being over 3,000.

21.6.2. The in-patient surgical beds are becoming increasingly inadequate to deal with the number of patients seeking admission, particularly in the case of beds for male patients. The District Nursing Service in Dar es Salaam and the Rehabilitation Centre at Mgulani have both helped to keep this down as far as possible.

21.6.3. The work in the operating theatre block continues to increase and was unfortunately handicapped by several failures in the air-conditioning apparatus.

21.6.4. The field of surgical operations performed continued to widen. Almost every sub-speciality within surgery was dealt with, although neurosurgery still lags behind. As in previous years, a large part of the work consists of herniae, hydroceles, fractures, orthopaedic surgery and the surgery of trauma in general.

21.6.5. A total of 4,325 surgical operations were carried out in the main theatres at Muhimbili. This number compares with 4,148 in 1962 and 3,993 in 1961.

21.7.1. The radiological service continued to function reasonably satisfactorily. The consultant radiologist, however, reports the usual difficulties in respect of breakdowns of apparatus in up-country stations. He reports that on the whole all machines continued to function satisfactorily, although some are now approaching the end of their working life.

21.7.2. A course for training radiographic auxiliaries was initiated on 1st September. This training will be continued in order to produce staff capable of managing the smaller installations up-country.

## 22. TRAINING OF MEDICAL PERSONNEL

### 22.1. GENERAL

22.1.1. A separate review of the training programmes for nurses and midwives will be found in para. 25. The succeeding paragraphs are devoted to training schemes for medical practitioners and other ancillary medical staff.

22.1.2. The main developments during 1963 in this field were the establishment of the Dar es Salaam School of Medicine for the training of medical practitioners and the extension of facilities for the rural medical aids course at Mwanza and Bukoba.

### 22.2. MEDICAL PRACTITIONERS

22.2.1. Tanganyika's developing health services are seriously handicapped amongst other things by a shortage of local medical manpower. The Ministry is endeavouring to relieve this shortage and its efforts resulted in the establishment of the Dar es Salaam School of Medicine during the year. The first students of the school were admitted in April; there were 15 candidates enrolled initially, but later only ten candidates were found fit to proceed to the substantive course when they were assessed in July after a three months' preliminary course in biology and chemistry.



22.2.2. A number of the entrants were accepted at school certificate level, owing to a paucity of candidates with a higher education. In 1964, however, it is intended to raise the minimum educational qualification for entrance to higher school certificate.

22.2.3. The establishment of the school was highlighted on the 9th December by a formal opening by Mwalimu Julius K. Nyerere of a new anatomy and physiology building. The President also formally named the school on this occasion the "Dar es Salaam School of Medicine". The anatomy and physiology building was constructed during the year with funds provided by the Rockefeller Foundation. Other assistance towards the founding of this school was in the form of staff, equipment and books, donated by the Rockefeller Foundation, the Basle Foundation for Developing Countries, the British Department of Technical Co-operation, U.N.I.C.E.F., and the Faculty of Medicine of Makerere University College.

22.2.4. It was not altogether unexpected that in its first year of existence the school was faced with considerable staffing difficulties, but at the time of writing this review it is possible to say a good start was made thanks to the generous assistance which came from such sources as were mentioned in para. 1.13 of the 1962 report. This spirit of goodwill towards the school was evident throughout the year and as no biochemist could be appointed for the school the Makerere Faculty of Medicine generously extended a helping hand and seconded a tutor who conducted a six weeks' concentrated course in biochemistry.

22.2.5. Apart from the new anatomy and physiology building the school has taken over a number of buildings, equipment and books from the old medical assistants course, but some of these have to be improved in order to suit the higher course. During the year a start was made in reorganizing and improving the library and also the hostel accommodation for the students.

### 22.3. ASSISTANT MEDICAL OFFICERS

22.3.1 During the year 36 more medical assistants, in two successive groups of 18 people each, were admitted to the up-grading course comprising lectures and clinical instruction at Dar es Salaam for six months and also at the Ifakara Rural Aid Centre for three months. The Ifakara course was again organized and conducted by Professor R. Geigy and his colleagues from the Tropical Institute of Basle. Twenty-eight medical assistants were passed as fit for promotion to the grade of assistant medical officer in 1963, but only 18 candidates in the first group were assessed as the second group is due to conclude studies in January, 1964.

22.3.2. The legal position of assistant medical officers and assistant dental officers was a subject of new legislation during the year; subject to certain conditions these workers can now be licensed as medical practitioners and dentists under the Medical Practitioners and Dentists Ordinance. There are now 53 assistant medical officers in the service of the Ministry.

### 22.4. MEDICAL ASSISTANTS

22.4.1. The demand for this grade of worker has continued. Although the Government centre at Dar es Salaam has been superseded by the school for doctors and conducted its last class of 30 students in their final year, the voluntary agency training centre at Bumbuli had 14 new admissions and was considering expanding its training facilities. Of the 44 candidates who sat the final examination at the end of the year, 37 passed and seven were referred. Bumbuli had a total of 35 students in training during the year.

### 22.5. RURAL MEDICAL AIDS

22.5.1. In previous years the Government training centre at Mwanza could only accept about 20 entrants a year. This was because for a two-year curriculum there was a total capacity for only 40 students at a time. During the year, however, the Swedish-Norwegian Radda Barnen organization established complementary training facilities at Bukoba and it is now possible to have two groups of 40 students each at a time between the two places.

22.5.2. The curriculum was also extended to three years, including six months of post-qualification practical training. During the year 67 students were admitted to Mwanza in two groups consisting of 33 and 34 persons. These two groups will complete the 2½-year formal course by a system of rotating residential semesters between Mwanza and Bukoba. The voluntary agency centre at Mnero is now also training rural medical aids to the new curriculum; eight students from this centre passed the final examinations at the end of the year and were then posted to a number of approved hospitals for the post-qualification practical attachment.



## 22.6. HEALTH INSPECTORS

22.6.1. There was little change in this training in 1963. Of the six students who started the *ab initio* course in 1962 one was transferred to the medical practitioners course, but the rest entered upon the second year of training. They are on a three-year curriculum which will lead to the Commonwealth qualification of the British Royal Society of Health. Unfortunately, attempts at a new intake in 1963 had to be abandoned because too few suitable candidates were available. The extension course for assistant health inspectors was continued. This course leads to promotion to the grade of health inspector after a 12-month formal and practical training. During the year 15 more assistant health inspectors entered the course and 28 were promoted to the health inspector grade, bringing the total since the onset of the courses in 1959 to 71 having attended the course and 45 having been promoted. Beginning from 1964 assistant health inspectors who have attended this course will be able to sit for the Commonwealth qualification.

## 22.7. DENTAL TECHNICIANS

22.7.1. Two new students were admitted to this training in 1963 bringing the total number of student dental technicians to six. It is not intended to have another intake in 1964 as the establishment for this cadre is small.

## 22.8. ASSISTANT DENTAL OFFICERS

22.8.1. During the year under review the up-grading of dental assistants to the posts of assistant dental officers was completed. There are now 17 assistant dental officers and only three dental assistants.

## 22.9. LABORATORY ASSISTANTS/TECHNICIANS

22.9.1. There were no suitable entrants to this course in 1963 and therefore no training was conducted. It is hoped that it will be possible to run a course in 1964. Apart from the laboratory technicians training leading to the A.I.M.L.T. qualification a 12-month in-service course is conducted at a lower level. Suitable persons with Standard VIII education and some experience of working in hospital laboratories are eligible to take this training, both the theoretical and practical, which leads to their promotion on successful completion to the grade of laboratory auxiliary.

## 23. THE MEDICAL SERVICES PROVIDED BY THE VOLUNTARY AGENCIES

23.1. In the 1962 Report mention was made of the appointment of a working party of the Mission Medical Advisory Committee to advise on revision of the system of subsidization of voluntary agency medical work and to make recommendations for the allocation of any additional sums of money which might be made available. The working party presented its recommendations in June, 1963, and later that month it was announced that Government has decided to implement immediately the major part of these recommendations. The Medical (Grants-in-Aid to Voluntary Agencies) Regulations, 1963, effective from 1st July, 1963, were published later in the year and an additional sum of £99,000 was voted to cover the increased cost.

23.2. The principal changes introduced under the revised scheme for subsidization of the voluntary agency medical work are the payment of grants for qualified African staff at rates equivalent to the Government salary for the post; the gradual withdrawal of grants for non-African nurses other than those in schools training nurses, medical assistants or rural medical aids; an increase in the grant payable for tuberculosis beds in hospitals taking part in regional anti-tuberculosis schemes, and a grant at £20 yearly for all hospital beds required to meet the development target of one bed for every 1,000 of the population.

23.3. The voluntary agencies continued to improve and expand their curative services during the year. The new leprosarium at Hombolo in the Dodoma Region (Diocese of Central Tanganyika) was opened and patients transferred there from Makutupora. With a present capacity for 150 patients this unit is expected to expand to cater for 300. In the same region an ophthalmic ward built from funds contributed by the Oxford Committee for Famine Relief and the Tanganyika Society for the Blind was opened at the Diocese of Central Tanganyika hospital at Mvumi. In the Iringa Region, Njombe District profited by the opening of a 40-bed maternity block at the Benedictine dispensary, Uwemba, and the completion of the re-building programme at Ilembula Hospital maintained by the Lutheran



Church of Southern Tanganyika. In Mbeya Region, the new Catholic Hospital at Igogwe in Rungwe District came into operation with a resident doctor and the out-patient department of the new hospital being built at Chimala by the Church of Christ Mission was very busy. The opening of a fine new 100-bed tuberculosis unit at the Capuchin Hospital, Ifakara, in Ulanga District, provided a first very important step in the fight against this disease in the Morogoro Region. In the same district a new female ward was completed at the Lutheran Hospital at Lugala. In Tanga Region the re-building of the Lutheran Hospital at Bumbuli in Lushoto District made excellent progress and the new hospital was almost completed by the end of the year. Also in Lushoto District, and maintained by the same church, the Irente Mental Farm Hospital which was opened at the end of last year got into its stride; 69 suitable cases from Mirembe Government mental hospital were transferred there. In the West Lake Region the Swedish Save the Children Fund (Radda Barnen) opened at Bukoba a leprosy hospital to form the centre of a comprehensive leprosy treatment scheme in which teams of doctors and nurses visit regularly 78 leprosy treatment centres scattered over all districts of the region. Adjacent to the leprosy hospital the organization has also opened a school where rural medical aids are trained in co-operation with the Government Medical Training Centre at Mwanza. At Nyakahanga Hospital in Karagwe District (Evangelical Church of North-West Tanganyika) a £25,000 improvement and extension scheme financed from funds supplied by the Scandinavian Governments as aid to developing countries was under way. Elsewhere throughout the country many other extensions and improvements to voluntary agency hospitals and dispensaries were effected.

23.4. As has been mentioned elsewhere in this report, 1963 saw the first very important steps towards the establishment of a comprehensive tuberculosis treatment and control scheme in the Lake and West Lake Regions. This project in which Government, local authorities and voluntary agencies will all co-operate has been made possible through the generosity of the Catholic organization Misereor in Europe, who are supplying the staff, equipment and capital expenditure necessary for the launching of the scheme.

23.5. One of the most important contributions of the voluntary agencies to the health services of the country has always been in the field of maternity and child health. From all regions this year there have been reports of rapidly increasing demands for these services; in particular for hospital confinements in areas where such were previously regarded with suspicion. The supply of U.N.I.C.E.F. milk has done much to encourage attendances at ante-natal and child health clinics through the medium of which a great deal of invaluable health teaching is put across. In a number of regions local authorities pay grants to voluntary agencies in return for free attendance at ante-natal and child health clinics and free hospital confinements. An agreement of this kind was made during the year between the Geita District Council and the Catholic Hospital at Sengerema, by which the voluntary agency also undertook to supervise the Council's maternity and child health clinics and to conduct maternity and child health sessions in the Council's dispensaries.

23.6. The nursing and midwifery training facilities offered by voluntary agencies were again increased in 1963. Nursing training schools were opened at the hospital maintained by the Medical Missionaries of Mary at Kabanga in Kasulu District and at the hospital maintained by the Lutheran Church of Southern Tanganyika at Ilembula in Njombe District, and a midwifery school was opened at the Catholic Hospital at Sengerema in Geita District.

23.7. Mention was made last year of radio-transceivers presented to various voluntary agency hospitals by the African Medical and Research Foundation. A number of other hospitals received similar gifts in 1963, and at three hospitals airstrips were constructed for use by the Air Ambulance Service of the Foundation.

23.8. The amounts paid by Government in the form of direct subsidies to voluntary agency medical work in the past three years are given below:—

	1960/61	1961/62	1962/63
	£	£	£
Staff Grants ... ..	92,838	97,061	99,291
Training Grants... ..	18,040	24,672	29,177
Hospital Additional Grants ... ..	33,501	29,648	28,029
Totals ... ..	144,379	151,272	156,497

## 24. THE RURAL MEDICAL SERVICES

24.1. Although some of the voluntary agency hospitals are situated in rural areas, this section is only concerned with the medical services provided through rural health centres and dispensaries. These two institutions are the main contact units between the people and the health service in the rural areas and, generally speaking, the local authorities are financially responsible for their provision.

24.2. It has been the policy of the Ministry of Health for many years to encourage the establishment of health centres throughout the country. In spite of this encouragement the development of these centres has been disappointing and in 1963 only one new health centre was established at Kaigara in the West Lake Region. The main reason for this unsatisfactory progress is the recurrent financial difficulties of the local authorities; but it would also appear that these units are not as popular as their satellite dispensaries with some of the local authorities.

24.3. A health centre has to provide four main types of services: a curative service, an environmental hygiene service, personal health services, including a maternity and child welfare service, and supervision of satellite dispensaries. U.N.I.C.E.F. supplies equipment free of charge to every health centre, including a Landrover, but the capital and recurrent costs of a health centre are about £10,000 and £3,700 respectively, and are mainly borne by the local authorities.

24.4. Dispensaries are the smallest units of the rural medical services. There are about 1,000 dispensaries and although the voluntary agencies provide about one-quarter of the total number of these units, it is the local authorities who play the leading role in establishing and maintaining dispensaries. The central Government is also still running 18 dispensaries in the rural areas, but, as was indicated in the 1962 report, it is the policy of Government to hand over these dispensaries to local authorities as soon as they are able to manage them. The responsibility of Government will be limited to supervision and the training of staff.

24.5. The total number of local authority dispensaries was 776 at the end of 1963, thus showing an increase over 715 in 1961. This increase was again a reflection of some of the results of nation building activities as well as the popularity. Unfortunately nation building enthusiasm in the construction of dispensaries was again not fully complemented by proper planning and consultation, and consequently there were some dispensaries which were built in 1963, but which did not fulfil their purpose.

24.6. The Ministry of Health is responsible for supervising rural medical services, directly in the case of the local authority dispensaries. The local authorities themselves during the year under review employed directly 35 medical assistants, 407 rural medical aids and 640 tribal dressers. In addition, the Kilimanjaro and Buhaya District Councils employed one licensed medical practitioner each for closer supervision of their rural units. Government medical officers are too few to be able to visit rural dispensaries as often as is desirable, or even to carry out all the necessary administrative and professional supervision. It is hoped, therefore, that other local authorities will employ their own supervisory staff when they are able to do so. It is intended in the long run to have every dispensary in the charge of a rural medical aid or better trained staff. During the year under review, of the 776 local authority dispensaries, 406 were staffed by rural medical aids and 370 by tribal dressers. This shortfall of rural medical aids is likely to increase with future expansion of rural medical services. It was therefore necessary to expand the training facilities for this grade of worker. This expansion has already been outlined in para. 22, but it may be soon desirable to establish new training centres for rural medical aids.

24.7. Unfortunately, even with the present output it was not unusual in 1963 to hear of unemployed rural medical aids. This was again because many local authorities were involved in budget difficulties during the year. In spite of the shortage of funds, however, the local authorities on the whole managed to maintain a reasonable and valuable dispensary service for their rural populations, although there have been a few disturbing reports of dilapidated buildings and shortage of supplies.

## 25. THE NURSING SERVICES

### 25.1. HOSPITAL

25.1.1. The proportion of trained nurses to untrained nursing staff employed in Government hospitals during 1963 continued to increase, the total establishment of trained nurses and midwives being raised to 795 and that of nursing orderlies reduced to 1,670.



Fifty-two nurses who completed training in Dar es Salaam joined the service, most of the female nurses commencing midwifery training. Ten of those who completed this training were sent for further training in Britain, the remainder being posted to district hospitals. Over fifty nurses and nurse/midwives joined Government service from voluntary agency training schools during the year, the majority of these being females.

25.1.2. Senior nursing staff continued to be scarce during the year although there was some improvement on the 1962 position. This improvement was due to the promotion of nurses to senior staff nurses on completion of the up-grading course in Dar es Salaam. These senior staff nurses filled the gaps left by the more experienced nursing sisters and although their lack of experience has sometimes been noticeable, this is a failing which time will remedy. One matron, sixteen expatriate nursing sisters and a charge nurse left Tanganyika during the year. Two local nursing sisters also left for Britain for further training. Some of these vacancies were filled by the six Tanganyika nursing sisters who returned from Britain after qualifying for State Registration there, and by a male charge nurse who returned after three years' training with his certificate in mental nursing. Unfortunately, only four of those completing the up-grading course during the year were females. This has meant that many hospitals were without a senior member of the staff able to supervise the maternity services. On the other hand, the increased number of male senior staff nurses has meant that some of the smaller district hospitals such as Kahama, Monduli and Newala have had a male senior staff nurse and better nursing supervision than they had in the past.

25.1.3. In Dar es Salaam the number of senior nursing staff has only just been maintained at a reasonable level by the employment of married women on temporary terms. District nursing services continued to function in Dar es Salaam with only one nursing sister. It was not possible to increase this service because of the general shortage of staff.

25.1.4. The American Peace Corps nurses performed very useful work during the year in Dar es Salaam, Tanga, Moshi, Tabora and Mwanza.

## 25.2. HEALTH SERVICES

25.2.1. There were only nine health visitors employed exclusively on health visitor duties, leaving many regions without one. In these places health nurses have maintained the ante-natal and child welfare services under the general supervision of a nursing sister or charge nurse. During the year, between ninety and one hundred health nurses were in service. This number was not increased to any appreciable extent as health nurses are no longer being trained.

## 25.3. NURSING TRAINING

25.3.1. There were 153 students in training at the nursing training centre in Dar es Salaam and 43 in training in Tanga at the beginning of the year. Those who commenced training in Dar es Salaam in January had all had at least ten years' formal education; unfortunately only 16 of them were girls and several of those who had had 12 years' education left after only a few months' training for jobs offering more immediate remuneration. The students commencing in Tanga were selected from serving nursing orderlies instead of from school girls. These students had completed eight years' education only.

25.3.2. A total of 54 students in Dar es Salaam completed their training successfully out of 91 who attempted the final examinations, which were held in two parts in June and December. The large number of failures is thought to be due to the absorption of students with a lower standard of education from the health nurse training course, which was discontinued in 1961. In addition, 29 students sat for, and 27 passed, the final midwifery examination in December. This midwifery course was the last of this type to be held in Dar es Salaam, as midwifery training has now been integrated into the three- and four-year nursing courses. There were no finalists from Tanga as the senior group of students there was still in its second year.

25.3.3. The up-grading course for experienced nurses was continued throughout the year. In the early part of the year 28 graduated, six of these being nurses from voluntary agency hospitals. Those graduating were replaced by a new class which will complete the up-grading in April, 1964.

25.3.4. The training of village midwives continued at three Government hospitals; 16 entered during the year and 13 completed training.

25.3.5. Tanganyika nurses have continued training in Britain and ten more left for training during the year. These were the first Tanganyika nurses to be allowed by the General Nursing Council of England and Wales to enter training at the third year so that they will sit for the State Registered Nurse certificate after one year's further training only. There were 33 nurses in Britain as "in-service" trainees of this Ministry at the end of the year, 15 of them training as mental nurses. Other ex-Government nurses are known to be training as private students. For the first time two Tanganyika nurses left to attend the Overseas Ward Sisters' Course at the Royal College of Nursing in Britain.

#### 25.4. TRAINING SCHOOL STAFF

25.4.1. Three of the four public health nurse educators from the World Health Organization who came to Tanganyika in 1962 left during the year. This loss necessitated the transfer to the training school of a matron and a health visitor who could ill be spared from their normal duties. Attempts were made to recruit sister-tutors from many parts of the world without success. This failure to recruit and the impending loss of the fourth World Health Organization tutor, led to the commencement of discussions on the possibility of training nurse-tutors locally.

#### 25.5. VOLUNTARY AGENCY TRAINING CENTRES

25.5.1. In January 222 nurses started training in voluntary agency centres. In December 133 students passed in nursing and 85 in the midwifery examinations. Sengerema Hospital had nurses sitting for the midwifery examination for the first time; all were successful.

25.5.2. Three new nursing training schools commenced training nurses in January. These are situated at Kabanga Hospital in the Kigoma Region, Rubya Hospital in the West Lake Region, and at Ilembula Hospital in the Iringa Region.

25.5.3. All but one of the voluntary agency hospitals have completed the change-over to the integrated syllabus, introduced in 1962. The last one to change, at Shirati, has also adopted the new syllabus but still has one group of students completing training to the pre-1962 syllabus.

### 26. LEGISLATION

26.1. An Act to amend the Medical Practitioners and Dentists Ordinance (Cap. 409) was passed in the National Assembly on 12th September, 1963 and received the President's assent on 19th September. Act No. 42 of 1963.

26.2. The principal amendment incorporated in the Act is the introduction of provision for licensing as medical practitioners or dentists of persons selected for appointment as Assistant Medical Officers or Assistant Dental Officers for service with the Government or with voluntary agencies recognized for the purpose by the Minister for Health. It is necessary for the efficient performance of their duties that certain of the rights and privileges of legally qualified practitioners should be conferred on these officials, but the licences will be terminated as soon as the holders cease to fill their appointments in the service of the Government or of the voluntary agencies.

26.3. A further amendment was made in relation to the practice of midwifery. Formerly there was provision for control of practice by persons other than legally qualified medical practitioners both in the Medical Practitioners and Dentists Ordinance and in the Nurses and Midwives Registration Ordinance (Cap. 325). This had led to certain difficulties and anomalies, and by the amending Act control ceased to be exercised through the Medical Practitioners and Dentists Ordinance.

26.4. A new provision introduced in the amending Act was designed to permit the Medical Council to obtain from registered medical practitioners and dentists information required to give a true picture of the distribution of medical care available throughout the country.

26.5. A number of other amendments have brought the Ordinance more into line with modern conditions, or have been inserted to improve the working of law.











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**REPUBLIC OF TANGANYIKA**

**MINISTRY OF HEALTH**

**Annual Report**

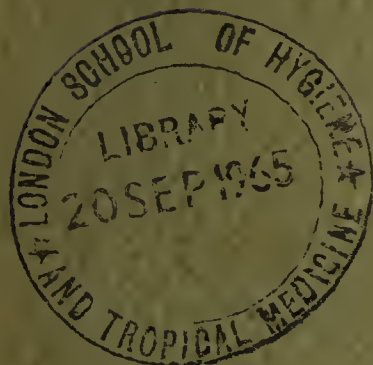
of the

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**1963**

**VOLUME II**

*(Statistics)*



1965

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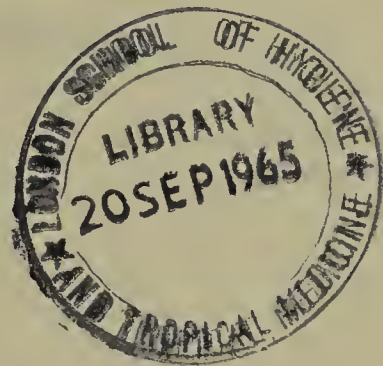
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Annual Report  
of the  
Health Division  
1963

VOLUME II  
(*Statistics*)













**TABLE I**  
**ESTABLISHMENT**  
*(as at 31st December, 1963)*

**ADMINISTRATION**

1	Minister for Health.
1	Parliamentary Secretary.
1	Permanent Secretary.
1	Principal Assistant Secretary.
2	Assistant Secretaries.
2	Secretaries.
1	Senior Accountant.
1	Accountant.
9	Assistant Accountants.
13	Accounts Assistants.
4	Assistant Establishment Officers.
1	Establishment Assistant.
11	Office Supervisors.
7	Higher Executive Officers.
29	Executive Officers.
165	Clerical Officers.
3	Machine Operators.
30	Typists.
21	Clerical Assistants.
13	Personal Secretaries/Stenographers/Audio-Typists.
1	Librarian.
1	Library Assistant.
1	Statistics Assistant.
30	Telephone Operators.

**HEALTH DIVISION**

1	Chief Medical Officer.
1	Deputy Chief Medical Officer.
3	Principal Medical Officers.
2	Senior Consultants.
15	Consultants.
28	Senior Medical Officers.
1	Senior Lecturer.
119	Medical Officers/Medical Registrars.
2	Senior Assistant Medical Officers.
91	Assistant Medical Officers.
1	Principal Pathologist.
1	Senior Pathologist.
1	Pathologist.
1	Government Chemist.
4	Chemists.
1	Principal Dental Surgeon.
6	Dental Surgeons.
19	Assistant Dental Surgeons.
1	Principal Matron.
1	Senior Sister Tutor.
8	Sister Tutors.
18	Matrons/Senior Charge Nurses.
129	Nursing Sisters/Charge Nurses.
50	Senior Staff Nurses.
4	Staff Nurses.
815	Nurses/Senior Nurses.
50	Nursing Auxiliaries.
1,712	Nursing Orderlies.
1	Supervisor, Isanga.
7	Senior Nursing Attendants.
60	Nursing Attendants.
1	Dietician/Catering Officer.



15 Housekeepers/Wardens.  
 26 Senior Medical Assistants.  
 151 Medical Assistants.  
 23 Rural Medical Aids/Senior Rural Medical Aids.  
 1 Chief Pharmacist.  
 3 Pharmacists.  
 1 Senior Compounder.  
 6 Assistant Pharmacists.  
 5 Senior Pharmaceutical Assistants.  
 39 Pharmaceutical Assistants.  
 13 Senior Laboratory Technicians/Technologists.  
 49 Laboratory Technicians/Laboratory Assistants.  
 70 Laboratory Auxiliaries.  
 5 Assistant Chemists.  
 3 Senior Chemical Assistants.  
 6 Chemical Assistants.  
 1 Senior Dental Technician.  
 2 Dental Technicians.  
 1 Assistant Dental Technician.  
 3 Dental Assistants.  
 1 Senior Hospital Secretary.  
 1 Hospital Secretary.  
 5 Senior Hospital Administrative Assistants.  
 8 Hospital Administrative Assistants.  
 1 Laundry Manager.  
 1 Laundry Foreman.  
 2 Health Education Officers.  
 3 Medical Instructors.  
 2 Teachers.  
 4 Physiotherapists.  
 1 Senior Radiographer.  
 8 Radiographers.  
 12 Radiographic Auxiliaries.  
 1 Radiological Technician.  
 1 X-Ray Mechanic.  
 1 Foreman, Transport.  
 1 Head Attendant.  
 8 Motor Drivers.  
 598 Subordinate Staff.  
 1 Supplies Officer.  
 1 Stores Officer.  
 5 Assistant Stores Officers.  
 36 Stores Assistants.  
 1 Security Assistant.  
 1 Chief Health Inspector.  
 51 Health Inspectors.  
 1 Senior Assistant Health Inspector.  
 53 Assistant Health Inspectors.  
 26 Sanitary Inspectors.  
 2 Senior Health Visitors.  
 21 Health Visitors.  
 112 Health Nurses/Senior Health Nurses.  
 2 Entomologists.  
 4 Malaria Field Officers.  
 3 Senior Malaria Assistants.  
 31 Malaria Assistants.  
 8 Sleeping Sickness Auxiliaries.  
 5 Nutrition Officers.  
 1 Printing Auxiliary.

TABLE II

## MEDICAL TRAINING

## APPROVED MEDICAL AND NURSING TRAINING CENTRES

Category of Student	Training Centre	Training Authority	Length of Course (Years)	Total Students under training 1963	Students qualified 1963	Total Students qualified in each category 1963
Medical Assistants	Dar es Salaam	Government ...	3	30	27	43
	Bumbuli	Lutheran Mission	3	41	16	
Dental Technicians	Dar es Salaam	Government ...	3	6	-	-
Health Inspectors...	Dar es Salaam	Government ...	3	6	-	-
Medical Students ...	Dar es Salaam	Government ...	5	10	-	-
Rural Medical Aids	Bukoba	Government ...	3	87	77	85
	Mwanza	Government ...	3	31	8	
	Mnero	R.C. Mission	3	77	27	
	Sumve	R.C. Mission	3	23	-	
Nurses	Bukumbi	R. C. Mission	3	45	22	
	Tanga ...	Government ...	2	38	9	
	Magila	U.M.C.A. ...	3	49	13	
	Lulindi	U.M.C.A. ...	3	154	56	
	Dar es Salaam	Government ...	3	39	12	
	Ndareda	Medical Missionaries of Mary	3	11	-	219
	Kabanga	Medical Missionaries of Mary	3	35	7	
	Ndolage	Church of Sweden	3	16	-	
	Rubya	R.C. Mission	3	55	16	
	Peramiho	Benedictine Mission	3	43	14	
	Kiomboi	Augustana Lutheran...	3	35	9	
	Kola Ndoto	Africa Inland Mission	3	74	22	
	Mvumi	C.M.S.	3	36	12	
	Shirati	Mennonite Mission	3	12	-	
	Ilembula	Swedish Evangelical ...	3			



**TABLE II (contd.)**  
**MEDICAL TRAINING**  
**APPROVED MEDICAL AND NURSING TRAINING CENTRES**

Category of Student	Training Centre	Training Authority	Length of Course (Years)	Total Students under training 1963	Students qualified 1963	Total Students qualified in each category 1963
Midwives ...	Dar es Salaam	Government ...	1	30	29	96
...	Ndolage	Church of Sweden	1	8	7	
...	Makiungu	R.C. Mission	1	6	6	
...	Ndanda	Medical Missionaries of Mary	2	22	10	
...	Magila	U.M.C.A.	1	12	12	
...	Sengerema	R.C. Mission	2	23	13	
...	Kilimatinde	C.M.S.	1	10	9	
...	Mvumi	C.M.S.	1	10	10	
...	Arusha	Government	1	6	6	
...	Tabora	Government	1	6	3	
Village Midwives ...	Nzega	Government	1	12	11	36
...	Liuli	U.M.C.A.	2	3	1	
...	Newala	U.M.C.A.	2	12	5	
...	Korogwe	U.M.C.A.	2	41	10	
...	Dar es Salaam	Government	1	30	-	
Nurses (Up-grading course) ...	Dar es Salaam	Government	1	22	4	4
Health Inspectors (Up-grading course) ...	Dar es Salaam	Government	1	29	14	14
Assistant Medical Officers (Up-grading course) ...	Dar es Salaam	Government	1	29	14	14

**TABLE III**  
**GOVERNMENT HOSPITALS AND DISPENSARIES**  
AS AT 31ST DECEMBER, 1963

Region	Hospital	No. of Wards	Number and Category of Beds					Grade of Accommodation
			General	Obste- trics	Tuber- culosis	Infec- tious	Mental	Total
Arusha ...	Arusha ...	19	137	I—GENERAL 16	HOSPITALS —	9	—	162
...	Mbulu ...	5	62	6	36	—	—	104
...	Monduli ...	5	43	2	13	—	—	58
Dar es Salaam ...	Dar es Salaam ...	59	514	120	154	72	10	870
Coast ...	Bagamoyo ...	5	32	4	—	3	—	39
...	Utete/Rufiji ...	4	46	—	—	—	—	46
...	Kisarawe ...	3	26	—	—	8	—	34
Dodoma ...	Dodoma ...	18	136	14	84	14	—	248
...	Mpwapwa ...	4	38	12	—	10	—	60
...	Kondoa ...	3	38	4	—	4	—	46
Iringa ...	Iringa ...	10	102	22	4	4	—	132
...	Njombe ...	6	59	12	—	8	—	80
Kigoma ...	Kigoma ...	4	60	8	—	—	—	68
...	Kibondo ...	4	39	13	—	8	—	60
...	Kasulu ...	4	52	—	—	8	—	60
Kilimanjaro ...	Moshi ...	19	219	16	—	24	—	259
...	Same ...	3	25	1	—	8	—	34
Mara ...	Musoma ...	12	76	14	2	2	—	94
...	Tarime ...	5	56	—	4	—	—	60
Mbeya ...	Mbeya ...	19	132	12	6	4	—	154
...	Tukuyu ...	6	91	13	—	8	—	112
...	Kyela ...	4	52	—	—	8	—	60
Morogoro ...	Morogoro ...	16	162	14	—	8	—	184
...	Kilosa ...	8	75	13	—	12	—	100
...	Mahenge...	10	73	1	—	4	—	78



**TABLE III—*contd.***  
**GOVERNMENT HOSPITALS AND DISPENSARIES**  
**AS AT 31ST DECEMBER, 1963**

Region	Hospital	No. of Wards	Number and Category of Beds					Grade of Accommodation		
			General	Obste- trics	Tuber- culosis	Infec- tious	Mental		Total	
Mtwara ...	Mtwara ...	6	40	4	15	—	—	59	I, II, III and IV I, III and IV I, II, III and IV I, III and IV I, III and IV	
	Lindi ...	7	77	13	13	—	—	103		
	Newala ...	5	28	—	28	8	—	64		
	Nachingwea ...	7	37	6	60	—	—	103		
	Kilwa ...	5	30	—	—	6	—	36		
Mwanza ...	Mwanza ...	19	178	17	14	13	—	222	I, III and IV I, III and IV I, III and IV	
	Geita ...	5	52	—	—	8	—	60		
	Ukerewe ...	5	52	—	—	8	—	60		
Ruvuma ...	Songea ...	9	39	6	21	2	—	68	III and IV II and IV II and IV II and IV II and IV	
	Shinyanga ...	6	64	13	—	6	—	83		
	Maswa ...	5	39	13	8	—	—	60		
	Kahama ...	5	38	16	10	—	—	64		
	Singida ...	5	52	—	—	8	—	60		
Tabora ...	Tabora ...	18	166	24	10	8	—	208	I, II, III and IV I, III and IV I, III and IV I, II and IV I, II and IV	
	Nzega ...	8	55	32	8	1	—	96		
	Sumbawanga ...	7	62	9	—	11	—	82		
	Tanga ...	18	288	36	86	—	—	410		
	Pangani ...	8	19	6	—	1	—	26		
Tanga ...	Korogwe...	7	75	6	24	11	—	116	I, II and IV I and IV I and IV I and IV I, II, III and IV	
	Lushoto ...	11	27	3	35	4	—	69		
	Muheza ...	7	52	—	46	8	—	106		
	Handeni ...	4	51	—	—	7	—	58		
	Bukoba ...	8	90	12	20	—	—	122		
West Lake ...	Bharamulo ...	5	35	4	3	—	—	42	I, II, III and IV I, II, III and IV	
	TOTAL—GENERAL HOSPITALS	445	3,991	538	704	336	10	5,579		
Kilimanjaro Dodoma	Kibongoto Tuberculosis	10	18	II.—SPECIAL HOSPITALS					258	III and IV I, II and IV I, II and IV II and IV
	Mirembe Mental	37	—	2	238	—	—	746		
	Isanga ...	20	—	—	—	—	246	246		

**TABLE III—contd.**  
**GOVERNMENT HOSPITALS AND DISPENSARIES**  
**AS AT 31ST DECEMBER, 1963**

Region	Hospital	No. of Wards	Number and Category of Beds					Grade of Accommodation
			General	Obste- trics	Tuber- culosis	Infec- tious	Mental	Total
Morogoro ... ..	Chazi Leprosy ...	3	—	1	—	34	—	35
Mbeya ... ..	Makete Leprosy ...	4	—	2	—	34	—	36
TOTAL—SPECIAL HOSPITALS...	5	74	18	5	238	68	992	1,321
Kilimanjaro ... ..	Usangi ...	5	34	4	—	6	—	44
West Lake ... ..	Siha ...	3	20	2	—	—	—	22
Mwanza ... ..	Ngara ...	2	24	—	—	—	—	24
Singida ... ..	Ngudu ...	2	16	—	—	—	—	16
Coast ... ..	Manyoni ...	3	16	1	—	1	—	18
Morogoro ... ..	Itigi ...	4	12	—	—	—	—	12
Mtwara ... ..	Malindi ...	1	10	—	—	—	—	10
Mbeya ... ..	Mafia ...	6	15	1	1	—	—	18
Dodoma ... ..	Kingolwira ...	3	33	—	—	—	—	33
Arusha ... ..	Wami ...	1	4	—	—	—	—	4
Iringa ... ..	Liwale ...	2	20	—	—	—	—	20
Tabora ... ..	Chunya ...	7	18	4	4	—	—	30
Dar es Salaam ... ..	Kongwa ...	3	18	2	—	—	—	20
...	Magugu ...	2	—	—	—	10	—	10
...	Oldeani ...	8	26	6	20	8	—	60
...	Malangali ...	4	23	4	—	—	—	27
...	Mpanda ...	2	10	—	—	—	—	10
...	Ukonga ...	1	12	—	—	—	—	12
TOTAL—DISPENSARIES	18	59	311	24	25	30	—	390
TERRITORIAL TOTAL	73	578	4,320	567	967	434	1,002	7,290



**TABLE IV**  
**IN-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES**

REGION	NUMBER ADMITTED DURING THE YEAR			NUMBER DISCHARGED DURING THE YEAR			DEATHS			DAILY AVERAGE IN HOSPITAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
ARUSHA ...	5,219	5,023	10,242	4,997	4,849	9,846	I.—GENERAL HOSPITALS					
COAST ...	1,935	1,965	3,900	1,864	1,896	3,760	220	186	406	181.05	149.12	330.17
DAR ES SALAAM ...	6,662	12,848	19,510	6,335	12,507	18,842	33	22	55	46.44	38.98	85.42
DODOMA ...	4,329	4,822	9,151	4,141	4,698	8,839	369	259	628	361.80	328.60	690.40
IRINGA ...	2,662	4,840	7,502	2,574	4,627	7,201	198	161	359	238.40	225.10	463.50
KIGOMA ...	2,963	3,109	6,072	2,773	2,956	5,729	82	78	160	67.00	79.00	146.00
KILIMANJARO ...	6,142	7,495	13,637	5,875	7,345	13,220	120	79	199	92.90	85.50	178.40
MARA ...	1,945	2,600	4,545	1,829	2,501	4,330	287	186	473	165.73	151.65	317.38
MBEYA ...	5,909	6,616	12,525	5,785	6,486	12,271	84	79	163	53.24	52.53	105.77
MOROGORO ...	5,894	4,851	10,745	5,738	4,734	10,472	117	122	239	130.04	134.76	264.80
MTWARA ...	3,809	3,703	7,512	3,659	3,587	7,246	136	93	229	168.96	118.14	287.10
MWANZA ...	6,349	5,624	11,973	6,202	5,393	11,595	150	103	253	186.70	131.40	318.10
RUVUMA ...	599	766	1,365	569	730	1,299	191	148	339	190.30	126.20	316.50
SHINYANGA ...	2,828	2,765	5,593	2,600	2,675	5,275	26	14	40	29.00	25.00	54.00
SINGIDA ...	1,390	1,227	2,617	1,342	1,186	2,528	164	130	294	92.00	93.00	185.00
TABORA ...	5,203	6,674	11,877	4,966	6,496	11,462	48	41	89	39.90	30.60	70.50
TANGA ...	9,638	7,005	16,643	9,202	6,756	15,958	184	175	359	184.50	153.43	337.93
WEST LAKE ...	2,066	1,707	3,773	2,040	1,709	3,749	439	252	691	370.01	241.37	611.38
TOTAL—GENERAL HOSPITALS ...	75,542	83,640	159,182	72,491	81,131	153,622	2,927	2,214	5,141	2,675.00	2,232.94	4,907.94
DODOMA:							II.—SPECIAL HOSPITALS					
Mirembe Hospital ...	577	307	884	480	271	751	41	11	52	570.70	237.30	808.00
Isanga Institution ...	69	11	80	55	8	63	4	1	5	224.30	42.40	266.70
KILIMANJARO:												
Kibongoto Tuberculosis Hospital ...	726	573	1,299	689	552	1,241	37	21	58	113.70	121.70	235.40
MBEYA:												
Makete Leprosarium ...	227	192	419	220	186	406	1	1	2	23.00	14.00	37.00

TABLE IV—*contd.*  
IN-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

REGION	NUMBER ADMITTED DURING THE YEAR			NUMBER DISCHARGED DURING THE YEAR			DEATHS			DAILY AVERAGE IN HOSPITALS		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
MOROGORO: Chazi Leprosarium ...	812	254	1,066	802	251	1,053	3	1	4	22.30	5.10	27.40
TANGA: Tanga Hospital, Infectious Diseases Section	158	—	158	154	—	154	—	—	—	37.97	—	37.97
TOTAL— SPECIAL HOSPITALS ...	2,569	1,337	3,906	2,400	1,268	3,668	86	35	121	991.97	420.50	1,412.47
III.—DISPENSARIES												
ARUSHA ...	—	—	—	—	—	—	—	—	—	—	—	—
COAST ...	291	281	572	277	270	547	14	11	25	9.02	7.95	16.97
DODOMA ...	610	659	1,269	524	586	1,110	17	20	37	7.50	7.90	15.40
IRINGA ...	762	857	1,619	755	807	1,562	11	15	26	6.00	14.00	20.00
KIGOMA ...	—	—	—	—	—	—	—	—	—	—	—	—
KILIMANJARO ...	1,138	1,844	2,982	1,099	1,800	2,899	31	33	64	26.04	51.11	77.15
MARA ...	—	—	—	—	—	—	—	—	—	—	—	—
MBEYA ...	—	—	—	—	—	—	—	—	—	—	—	—
MOROGORO ...	778	105	883	778	105	883	—	—	—	8.00	0.80	8.80
MTWARA ...	160	168	328	147	164	311	6	3	9	4.40	7.40	11.80
MWANZA ...	384	372	756	376	372	748	10	10	20	6.00	10.00	16.00
RUVUMA ...	—	—	—	—	—	—	—	—	—	—	—	—
SHINYANGA ...	—	—	—	—	—	—	—	—	—	—	—	—
SINGIDA ...	507	708	1,215	496	682	1,178	5	14	19	7.16	4.85	12.01
TABORA ...	272	190	462	246	177	423	21	11	32	4.60	5.50	10.10
TANGA ...	—	—	—	—	—	—	—	—	—	—	—	—
WEST LAKE ...	418	450	868	426	445	871	13	14	27	8.90	9.40	18.30
TOTAL DISPENSARIES ...	5,320	5,634	10,954	5,124	5,408	10,532	128	131	259	87.62	118.91	206.53
TERRITORIAL TOTALS ...	83,431	90,611	174,042	80,015	87,807	167,822	3,141	2,380	5,521	3,754.59	2,772.35	6,526.94



**TABLE V**  
**OUT-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES**

**I.—GENERAL HOSPITALS**

REGION	TOTAL ATTENDANCES			TOTAL NEW CASES		
	Male	Female	Total	Male	Female	Total
ARUSHA ... ..	177,012	127,646	304,658	83,014	62,031	145,045
COAST ... ..	128,901	109,222	238,123	28,411	23,516	51,927
DAR ES SALAAM ... ..	508,682	415,048	923,730	274,455	210,310	484,765
DODOMA ... ..	150,241	144,615	294,856	68,542	62,868	131,410
IRINGA ... ..	121,014	122,291	243,305	39,765	37,403	77,168
KIGOMA ... ..	125,377	118,744	244,121	51,064	48,616	99,680
KILIMANJARO ... ..	239,049	221,798	460,847	75,669	62,850	138,519
MARA ... ..	103,828	97,739	201,567	41,247	40,370	81,617
MBEYA ... ..	185,741	171,290	357,031	87,597	81,556	169,153
MOROGORO ... ..	149,950	112,439	262,389	72,159	60,126	132,285
MTWARA ... ..	231,122	178,206	409,328	97,802	76,126	173,928
MWANZA ... ..	120,730	96,390	217,120	55,437	47,453	102,890
RUVUMA ... ..	29,471	20,563	50,034	14,546	11,339	25,885
SHINYANGA ... ..	72,530	68,494	141,024	74,010	67,861	141,871
SINGIDA ... ..	38,576	36,512	75,088	16,848	16,574	33,422
TABORA ... ..	115,322	105,877	221,199	63,115	56,732	119,847
TANGA ... ..	523,444	308,549	831,993	121,355	85,629	206,984
WEST LAKE ... ..	80,840	53,330	134,170	33,315	24,414	57,729
TOTAL— GENERAL HOSPITALS ...	3,101,830	2,508,753	5,610,583	1,298,351	1,075,774	2,374,125

**II.—SPECIAL HOSPITALS**

REGION	TOTAL ATTENDANCES			TOTAL NEW CASES		
	Male	Female	Total	Male	Female	Total
DAR ES SALAAM: Infectious Diseases Section ... ..	56,196	52,465	108,661	682	352	1,034
DODOMA: Mirembe Hospital ... ..	29	3	32	7	1	8
Isanga Institution ... ..	—	—	—	—	—	—
KILIMANJARO: Kibongoto Tuberculosis Hospital ...	427	298	725	2,107	1,767	3,874
MBEYA: Makete Leprosarium ... ..	—	—	—	—	—	—
MOROGORO: Chazi Laprosarium ... ..	5,928	3,162	9,090	2,014	1,187	3,201
TANGA: Infectious Diseases Section ... ..	6,934	4,464	11,398	378	194	572
TOTAL— SPECIAL HOSPITALS ... ..	69,514	60,392	129,906	5,188	3,501	8,689

TABLE V—*contd.*

## OUT-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

## III.—DISPENSARIES

REGION	TOTAL ATTENDANCES			TOTAL NEW CASES		
	Male	Female	Total	Male	Female	Total
ARUSHA ... ..	51,070	25,742	76,812	30,435	9,654	40,089
COAST ... ..	19,581	15,409	34,990	6,913	4,694	11,607
DODOMA ... ..	10,340	8,492	18,832	7,261	6,662	13,923
IRINGA ... ..	16,037	15,593	31,630	4,987	4,820	9,807
KIGOMA ... ..	—	—	—	—	—	—
KILIMANJARO ... ..	55,330	77,582	132,912	14,530	22,676	37,206
MARA ... ..	—	—	—	—	—	—
MBEYA ... ..	—	—	—	—	—	—
MOROGORO ... ..	27,680	17,122	44,802	18,846	10,443	29,289
MTWARA ... ..	30,518	23,652	54,170	8,487	6,735	15,222
MWANZA ... ..	39,496	35,620	75,116	10,998	8,926	19,924
RUVUMA ... ..	—	—	—	—	—	—
SHINYANGA ... ..	—	—	—	—	—	—
SINGIDA ... ..	25,074	28,054	53,128	14,066	13,389	27,455
TABORA ... ..	36,216	28,604	64,820	13,949	12,144	26,093
TANGA ... ..	—	—	—	—	—	—
WEST LAKE ... ..	16,552	15,974	32,526	12,015	11,148	23,163
TOTAL—DISPENSARIES ...	327,894	291,844	619,738	142,487	111,291	253,778
TERRITORIAL TOTALS ...	3,499,238	2,860,989	6,360,227	1,446,026	1,190,566	2,636,592



TABLE VI  
MATERNITY AND CHILD HEALTH SERVICES

REGION	Ante-Natal Clinics			Child Health Clinics			Total Confinements attended	Deliveries without Complications	Deliveries with Complications	Abortions	Live Births	Still Births	Maternal Deaths	Deaths of Infants
	No. of Clinics	First attendances	Total attendances	No. of Clinics	First attendances	Total attendances								
Total Government Services	A. GOVERNMENT SERVICES						2,143	1,930	213	109	2,071	78	29	59
	Arusha	4	3,331	15,195	5	2,751	21,485	1,930	213	109	2,071	78	29	59
	Coast	4	1,018	4,198	4	654	3,070	518	56	32	534	39	4	10
	Dar es Salaam	6	10,550	47,165	5	6,293	36,381	4,522	2,337	122	6,998	232	21	152
	Dodoma	4	3,771	13,354	4	2,227	16,353	1,281	180	53	1,228	70	8	18
	Iringa	3	3,224	17,061	3	2,244	38,247	20,249	270	168	19,447	316	53	26
	Kigoma	3	1,624	5,750	3	982	9,166	610	130	52	720	30	18	27
	Kilimanjaro	4	4,890	19,269	4	3,363	40,234	2,324	321	319	2,574	111	4	33
	Mara	2	2,738	6,775	2	647	4,551	529	89	136	464	51	12	7
	Mbeya	3	2,967	13,491	3	1,731	13,673	1,024	214	101	1,155	73	16	26
	Morogoro	5	3,244	12,605	4	1,018	6,060	1,508	395	142	1,819	117	8	27
	Mtwara	7	2,420	13,191	7	3,334	28,066	1,292	126	64	1,384	64	10	24
	Mwanza	2	3,016	13,182	2	2,208	8,867	1,485	128	67	1,426	55	14	20
	Ruvuma	1	596	2,565	1	340	2,263	144	25	5	159	7	2	1
	Shinyanga	2	3,705	10,510	2	1,473	4,968	1,893	138	152	1,949	79	17	35
	Singida	1	408	1,712	-	-	-	271	34	164	152	8	-	6
	Tabora	4	5,220	17,954	3	2,463	13,631	3,527	392	59	3,390	92	7	45
	Tanga	10	5,371	25,201	10	4,457	42,210	2,510	290	364	2,487	113	20	80
	West Lake	3	1,978	9,439	3	989	8,574	555	228	38	725	59	6	23
Total Government Services							50,618	45,021	5,566	2,147	48,682	1,594	249	619
Total Voluntary Agency Services	B. VOLUNTARY AGENCY SERVICES						1,774	1,279	495	87	1,737	58	4	13
	Arusha	9	5,586	12,646	8	2,376	11,269	1,279	495	87	1,737	58	4	13
	Coast	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dodoma	1	1,384	16,188	1	304	2,134	317	50	46	360	7	3	10
	Iringa	3	1,829	3,181	1	428	716	654	152	26	486	24	2	18
	Kigoma	3	3,108	12,263	3	2,627	10,276	803	78	81	859	22	2	11
	Kilimanjaro	10	3,462	12,968	7	1,677	10,601	2,537	245	145	2,479	58	11	71
	Mara	3	3,567	7,391	3	349	1,495	481	331	128	758	49	8	26
	Mbeya	4	2,003	6,179	3	2,023	10,672	809	228	67	775	42	1	21
	Morogoro	4	1,050	7,471	3	1,698	5,628	2,643	429	131	2,963	121	8	166
	Mtwara	13	4,668	23,639	12	4,359	38,353	2,551	650	199	2,505	148	16	86
	Mwanza	10	8,645	22,834	9	2,689	10,816	1,226	424	187	1,565	106	15	109
	Ruvuma	4	7,573	26,238	5	9,952	38,147	4,509	598	185	5,097	221	17	74
	Shinyanga	4	2,814	10,339	3	3,145	11,204	1,128	250	54	1,105	37	6	34
	Singida	9	4,755	11,216	8	2,265	10,892	1,793	260	143	1,703	62	12	29
	Tabora	11	6,190	19,608	10	6,102	41,554	2,925	510	108	2,807	109	6	68
	Tanga	14	9,286	40,717	13	12,876	55,193	2,468	536	114	2,406	136	16	61
	West Lake	20	14,961	40,742	18	14,512	35,142	2,020	429	298	2,018	61	8	59
Total Voluntary Agency Services							30,538	24,863	5,665	1,999	29,623	1,261	135	856

TABLE VI—contd.  
MATERNITY AND CHILD HEALTH SERVICES

REGION	Ante-Natal Clinics		Child Health Clinics			Total Confinements attended	Deliveries without Complications	Deliveries with Complications	Abortions	Live Births	Still Births	Maternal Deaths	Deaths of Infants
	No. of Clinics	First attendances	Total attendances	No. of Clinics	First attendances	Total attendances							
				C. LOCAL AUTHORITY SERVICES									
Arusha	9	921	3,532	9	1,113	11,427	333	322	5	330	4	—	6
Coast	1	—	103	—	—	—	68	68	—	68	—	—	—
Dodoma	23	6,170	25,881	23	4,556	28,291	3,179	3,010	75	3,014	43	5	58
Iringa	5	1,890	8,819	5	1,683	12,399	2,098	3,049	97	2,022	81	36	68
Kigoma	2	936	3,218	2	390	2,140	361	351	11	356	5	—	2
Kilimanjaro	10	9,227	33,605	10	5,384	26,803	5,155	5,018	63	5,140	53	1	37
Mara	2	3,855	7,752	2	1,709	4,798	534	494	19	483	18	—	5
Mbeya	6	3,488	13,311	6	1,308	8,292	1,199	1,141	51	1,174	22	2	5
Morogoro	7	1,780	7,461	8	2,111	9,772	199	191	3	180	5	—	8
Mtwara	22	6,341	47,111	22	10,149	66,486	2,199	2,037	56	2,116	82	3	37
Mwanza	12	8,981	23,625	12	8,179	23,545	1,309	1,208	89	1,245	53	5	10
Ruvuma	1	257	1,187	1	110	1,120	860	859	24	776	38	22	4
Shinyanga	3	17,826	42,362	3	5,337	12,665	8,264	7,828	340	7,804	157	14	86
Singida	17	5,015	16,809	17	6,576	21,555	1,215	1,167	24	1,138	30	2	14
Tabora	15	6,922	21,328	15	5,168	22,716	3,131	2,889	55	3,089	72	1	31
Tanga	22	7,446	33,205	14	2,383	9,413	5,905	5,884	11	5,892	21	4	5
West Lake	14	12,650	35,989	14	8,418	15,197	2,767	2,395	102	2,761	39	4	8
Total Local Services	171	93,705	325,298	163	64,574	276,619	38,776	36,911	1,025	37,588	723	99	384
Territorial Totals	361	234,657	847,535	335	169,130	868,510	119,932	106,795	5,171	115,893	3,578	483	1,859



**TABLE VII A**  
**LEPROSARIA (IN-PATIENTS)—GOVERNMENT, LOCAL AUTHORITY AND VOLUNTARY AGENCY**

REGION	No. of Leprosaria	Leprosy Patients admitted during 1963	Discharged	Absconded	Births	Deaths from Leprosy	Deaths from other Causes*	Leprosy patients resident at 31st December, 1963				Clinical Classification active cases			Cases on Sulphone Therapy				Burnt-out Cases		Non-Lepromatous persons resident at 31st Dec. 1963		
								Men	Women	Children	Total	Lepromatous	Tuberculoïd	Mixed	Men	Women	Children	Total	Without deformity	With deformity	Adults	Children	Total
Arusha ...	1	14	—	12	2	4	4	60	48	15	123	35	70	18	40	30	4	74	94	29	—	8	
Coast ...	1	64	51	—	—	—	1	11	2	—	13	28	23	13	58	6	—	64	—	—	—	6	
Dar es Salaam	1	104	85	10	—	—	—	99	48	20	167	122	5	40	81	46	20	147	—	—	—	—	
Dodoma*	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Iringa ...	—	—	—	—	—	—	—	12	4	—	16	1	12	3	11	4	—	15	1	—	12	7	
Kigoma ...	1	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kilimanjaro	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mara ...	1	108	27	14	13	—	5	95	87	22	204	69	69	66	93	87	22	202	2	1	18	17	
Mbeya ...	1	144	15	55	6	—	1	285	183	43	511	211	205	95	239	164	43	446	2	—	3	23	
Morogoro	3	176	213	25	12	6	3	346	135	45	526	211	200	107	301	109	43	453	3	6	36	68	
Mtwara ...	2	541	170	79	17	2	2	335	143	109	587	263	373	—	402	203	123	728	—	8	—	18	
Mwanza ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ruvuma...	3	254	143	45	56	—	14	352	332	116	800	167	618	19	330	322	115	767	35	60	658	219	
Shinyanga	1	163	143	31	19	—	—	234	118	55	407	191	101	115	234	118	55	407	1	2	49	30	
Singida ...	1	125	103	22	22	1	6	261	180	26	467	345	38	84	253	178	25	456	1	3	21	37	
Tabora ...	1	107	57	16	6	—	4	269	126	88	483	377	106	5	269	126	88	483	2	2	—	15	
Tanga ...	3	55	38	4	1	1	1	108	22	4	134	51	34	19	82	17	10	109	20	22	3	9	
West Lake	2	78	27	3	1	—	1	28	40	16	84	39	45	—	27	36	16	79	—	3	3	3	
Total ...	23	1,933	1,072	316	158	20	42	2,495	1,468	559	4,522	2,110	1,899	584	2,420	1,446	564	4,430	157	136	803	460	1,263

\*Makutupora Leprosarium was closed down on 1st September and patients were transferred to Hombolo Leprosy Centre.

**TABLE VII B**  
**LEPROSY OUT-PATIENT CLINICS**  
(Including Government, Local Authority and Voluntary Agency Clinics)

REGION	No. of Clinics	Total Cases under Treatment 1963				New Cases under Treatment				Cases under Sulphone Treatment			Cases attending regularly	Cases not attending regularly	Cases discontinued treatment	Cases Discharged Clinically Cured		
		Lepro-matous	Tuberculo-id	Indeter-minate	Total	Lepro-matous	Tuberculo-id	Indeter-minate	Total	Adults	Child-ren	Total				Adults	Child-ren	Total
Arusha...	1	11	58	42	111	1	8	6	15	105	6	111	60	51	1	-	-	-
Coast ...	14	40	98	20	886*	65	81	30	427*	251	5	818*	659	168	67	1	-	1
Dar es Salaam	1	160	564	174	898	40	176	68	284	874	57	931	614	284	-	1	-	1
Dodoma ...	24	123	216	158	497	51	128	137	316	491	16	507	355	142	7	3	-	3
Iringa ...	3	28	64	-	92	8	26	-	34	32	2	34	88	34	4	5	-	5
Kigoma	39	261	2,386	384	3,031	44	363	52	459	2,822	583	3,405	1,557	663	232	13	-	13
Kilimanjaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mara ...	19	882	1,064	543	2,489	332	473	296	1,101	1,286	110	1,396	1,084	293	33	646	53	699
Mbeya ...	13	50	1,355	274	1,679	-	279	48	327	1,371	308	1,679	1,564	94	11	90	21	111
Morogoro	48	3,256	9,510	3,548	16,314	261	667	254	1,182	9,569	4,937	14,506	9,228	4,149	1,046	68	5	73
Mtwara	48	1,013	5,520	325	6,858	240	1,605	135	1,980	5,614	410	6,024	5,527	1,206	1,297	302	20	322
Mwanza	4	86	151	166	403	19	31	54	104	351	52	403	294	70	39	2	-	2
Ruvuma	22	282	1,276	75	1,633	74	200	20	294	1,443	158	1,601	1,241	385	110	62	6	68
Shinyanga	41	414	1,118	124	1,656	137	407	47	591	1,038	52	1,140	1,332	425	87	3	-	-
Singida...	12	103	809	168	1,080	21	275	150	446	1,012	88	1,100	911	150	91	94	10	104
Tabora...	37	307	1,657	268	2,232	72	365	88	525	1,917	333	2,250	1,658	461	218	33	20	53
Tanga ...	62	342	1,452	949	2,743	82	316	228	626	2,435	306	2,641	1,386	1,073	248	32	-	32
West Lake	78	197	2,224	99	2,520	42	530	58	630	2,164	257	2,421	2,092	425	100	295	5	300
<b>Total ...</b>	<b>466</b>	<b>7,555</b>	<b>29,522</b>	<b>7,317</b>	<b>45,122</b>	<b>1,489</b>	<b>5,930</b>	<b>1,671</b>	<b>9,341</b>	<b>32,825</b>	<b>7,680</b>	<b>40,967</b>	<b>29,650</b>	<b>10,076</b>	<b>3,591</b>	<b>1,650</b>	<b>140</b>	<b>1,787</b>

\*Only totals available from some centres.



**TABLE VIII**  
**LOCAL AUTHORITY MEDICAL SERVICES**

Region	No. of Rural Health Centres	NUMBER OF DISPENSARIES		M.A.	R.M.A.	Dresser	Beds	NEW CASES			TOTAL ATTENDANCES		
		Grade A	Grade B					Male	Female	Total	Male	Female	Total
Arusha ...	2	21	23	3	21	52	63	266,501	239,714	506,215	536,748	450,725	987,473
*Coast ...	-	4	7	-	4	7	-	31,927	30,260	62,187	83,402	62,783	146,185
Dodoma	4	18	28	3	21	45	237	267,859	269,121	536,980	492,921	549,247	1,042,168
Iringa ...	-	26	7	-	24	9	-	140,029	148,053	288,082	314,555	366,304	680,859
Kigoma...	1	10	29	2	12	55	70	233,465	269,731	503,196	397,499	466,258	863,757
Kilimanjaro	3	26	6	3	27	48	62	348,316	364,066	712,382	474,732	511,330	986,062
Mara ...	2	16	18	2	16	21	20	257,609	229,429	487,038	484,545	454,085	938,630
Mbeya ...	1	35	22	1	40	17	45	351,094	377,096	728,190	520,264	571,498	1,091,762
Morogoro	2	26	43	3	28	71	29	273,827	267,129	540,956	611,066	419,814	1,030,880
Mtwara	1	25	34	3	23	36	59	290,543	285,561	576,104	653,344	704,471	1,357,815
Mwanza	4	47	21	6	49	45	340	901,714	424,663	1,326,377	885,709	852,241	1,737,950
Ruvuma	1	12	11	1	10	27	22	70,758	63,419	134,177	178,663	174,334	352,997
Shinyanga	3	37	38	3	36	67	605	515,382	556,246	1,071,628	1,016,833	1,097,805	2,114,638
Singida ...	3	8	21	1	10	23	24	195,024	218,913	413,937	353,494	397,404	750,898
Tabora ...	1	21	32	4	21	55	88	223,057	222,601	445,658	452,570	468,560	921,130
Tanga ...	-	33	14	-	35	33	34	139,968	137,129	277,097	269,419	272,761	542,180
West Lake	1	33	23	1	34	43	276	291,701	293,324	585,025	501,905	364,976	866,881
Total ...	29	398	377	36	411	654	1,974	4,798,774	4,396,455	9,195,229	8,227,669	8,184,596	16,412,265

\*Figures from three districts not available.

**TABLE IX A**  
**VOLUNTARY AGENCY HOSPITALS WITH RESIDENT MEDICAL PRACTITIONERS**  
**AS AT 31ST DECEMBER, 1963**

Region and Voluntary Agency	Hospital	Number of Beds
<i>Arusha:</i>		
Lutheran Church of Northern Tanganyika ...	Nkoaranga ... ..	60
Medical Missionaries of Mary ... ..	Ndareda ... ..	81
Iraqw Lutheran Church ... ..	Haydom ... ..	52
<i>Dodoma:</i>		
Diocese of Central Tanganyika ... ..	Mvumi ... ..	120
<i>Iringa:</i>		
Benedictine... ..	Lugarawa ... ..	150
Consolata Fathers... ..	Tosamaganga... ..	60
Consolata Fathers... ..	Ulete ... ..	39
Swedish Evangelical ... ..	Ilembula ... ..	175
<i>Kigoma:</i>		
Medical Missionaries of Mary ... ..	Kabanga ... ..	90
Seventh Day Adventist ... ..	Heri ... ..	59
<i>Kilimanjaro:</i>		
Lutheran Church of Northern Tanganyika ...	Machame ... ..	110
Lutheran Church of Northern Tanganyika ...	Gonja ... ..	38
<i>Mara:</i>		
Maryknoll ... ..	Kowak ... ..	40
Mennonite ... ..	Shirati ... ..	104
Catholic Diocese of Mwanza ... ..	Kibara ... ..	38
<i>Mbeya:</i>		
Finnish Lutheran ... ..	Itete ... ..	60
White Fathers ... ..	Kisa ... ..	46
Franciscan ... ..	Igogwe ... ..	40
American Baptist ... ..	Mbeya (Tuberculosis) ...	104
<i>Morogoro:</i>		
Diocese of Central Tanganyika ... ..	Berega ... ..	50
Danish Lutheran ... ..	Lugala... ..	57
Swiss Capuchin ... ..	Ifakara ... ..	214
<i>Mtwara:</i>		
C.P.E.A. Masasi Diocese... ..	Mkomaindo ... ..	107
Benedictine... ..	Mnero ... ..	85
Benedictine... ..	Ndanda ... ..	225
C.P.E.A. Masasi Diocese... ..	Newala ... ..	75
Benedictine... ..	Nyangao ... ..	85
C.P.E.A. Masasi Diocese... ..	Lulindi ... ..	132
Capuchin ... ..	Kipatimu ... ..	62
<i>Mwanza:</i>		
Catholic Diocese of Mwanza ... ..	Sumve ... ..	177
Catholic Diocese of Mwanza ... ..	Bukumbi ... ..	150
Catholic Diocese of Mwanza ... ..	Kagunguli ... ..	127
Catholic Diocese of Mwanza ... ..	Sengerema ... ..	151
<i>Ruvuma:</i>		
C.P.E.A. Diocese of South-West Tanganyika ...	Liuli ... ..	50
Christian Mission in Many Lands ... ..	Mbesa ... ..	82
Benedictine... ..	Peramiho ... ..	241
Benedictine... ..	Litembo ... ..	131
<i>Shinyanga:</i>		
Africa Inland ... ..	Kola Ndoto ... ..	109



**TABLE IX A—contd.**  
**VOLUNTARY AGENCY HOSPITALS WITH RESIDENT MEDICAL PRACTITIONERS**  
**AS AT 31st DECEMBER, 1963**

Region and Voluntary Agency						Hospital				Number of Beds
<i>Singida:</i>										
Lutheran Church of Central Tanganyika						Kiomboi	...	...	...	108
Diocese of Central Tanganyika						Kilimatinde	...	...	...	87
Medical Missionaries of Mary						Makiungu	...	...	...	69
<i>Tabora:</i>										
Moravian						Sikonge	...	...	...	115
Swedish Free						Nkinga	...	...	...	71
<i>Tanga:</i>										
C.P.E.A.						Magila	...	...	...	170
Lutheran, Usambara						Bumbuli	...	...	...	144
C.P.E.A.						Kideleko	...	...	...	68
<i>West Lake:</i>										
Diocese of Victoria Nyanza						Murgwanza	...	...	...	55
Evangelical Church of N.W. Tanganyika						Ndolage	...	...	...	120
Evangelical Church of N.W. Tanganyika						Nyakahanga	...	...	...	60
Catholic Diocese of Bukoba						Kagondo	...	...	...	175
Catholic Diocese of Bukoba						Rubya	...	...	...	102
Catholic Diocese of Rulenge						Rulenge	...	...	...	80
Total						52				5,200

**TABLE IX B**  
**VOLUNTARY AGENCY MEDICAL SERVICES**

REGION	Number of Hospitals and Dispen- saries	Beds	In- Patient Admis- sions	Out-Patients	
				New Cases	Total Atten- dances
I.—HOSPITALS WITH DOCTORS					
ARUSHA ... ..	3	193	6,179	26,149	57,865
COAST ... ..	—	—	—	—	—
DODOMA ... ..	1	120	2,631	7,097	25,282
IRINGA ... ..	4	424	6,464	30,873	102,613
KIGOMA ... ..	2	149	2,591	7,313	28,397
KILIMANJARO ... ..	2	148	4,332	11,800	35,434
MARA ... ..	3	182	4,953	22,517	47,499
MBEYA ... ..	5	290	4,684	16,029	86,308
MOROGORO ... ..	3	321	4,614	48,571	153,303
MTWARA... ..	6	696	10,524	43,309	358,427
MWANZA ... ..	4	605	6,955	30,695	137,181
RUVUMA ... ..	4	504	27,763	316,104	1,101,987
SHINYANGA ... ..	1	109	2,778	10,564	35,210
SINGIDA ... ..	3	264	6,906	23,355	57,401
Tabora ... ..	2	186	2,718	10,569	42,820
TANGA ... ..	3	382	6,836	22,247	85,391
WEST LAKE ... ..	6	592	10,414	43,135	91,960
TOTAL—Hospitals ...	52	5,165	111,342	670,327	2,447,078
II.—DISPENSARIES WITH OVER TWENTY BEDS					
ARUSHA ... ..	4	143	5,868	21,505	52,123
COAST ... ..	—	—	—	—	—
DODOMA ... ..	—	—	—	—	—
IRINGA ... ..	9	417	13,631	58,913	194,123
KIGOMA ... ..	3	123	1,633	32,247	95,908
KILIMANJARO ... ..	8	332	10,187	34,409	97,867
MARA ... ..	1	31	1,028	6,545	8,790
MBEYA ... ..	1	60	655	2,546	8,590
MOROGORO ... ..	4	137	1,682	26,695	128,480
MTWARA... ..	4	135	1,499	19,551	213,360
MWANZA ... ..	2	62	433	1,460	10,923
RUVUMA ... ..	1	30	753	12,157	130,404
SHINYANGA ... ..	—	—	—	—	—
SINGIDA ... ..	6	166	5,435	21,187	73,725
TABORA ... ..	6	210	2,954	34,955	93,907
TANGA ... ..	6	398	5,928	38,396	129,138
WEST LAKE ... ..	6	268	6,005	34,595	64,713
TOTALS—Dispensaries with over Twenty Beds ...	61	2,512	57,691	345,161	1,302,051
III.—OTHER DISPENSARIES AND CLINICS					
ARUSHA ... ..	1	12	246	4,649	8,733
COAST ... ..	—	—	—	—	—
DODOMA ... ..	—	—	—	—	—
IRINGA ... ..	25	8	167	188,182	380,004
KIGOMA ... ..	—	—	—	—	—
KILIMANJARO ... ..	9	33	1,241	24,633	67,013
MARA ... ..	—	—	—	—	—
MBEYA ... ..	5	15	245	34,575	102,021
MOROGORO ... ..	12	34	396	37,452	136,910
MTWARA... ..	9	42	615	23,807	192,631
MWANZA ... ..	4	14	378	23,567	75,246

**TABLE IX B—*contd.***  
**VOLUNTARY AGENCY MEDICAL SERVICES**

REGION	Number of Hospitals and Dispen- saries	Beds	In- Patient Admis- sions	Out-Patients	
				New Cases	Total Atten- dances
III.—OTHER DISPENSARIES AND CLINICS— <i>contd.</i>					
RUVUMA ... ..	2	2	36	21,107	59,584
SHINYANGA ... ..	7	14	377	27,698	70,484
SINGIDA ... ..	5	32	943	20,842	56,733
TABORA ... ..	11	58	1,305	71,631	147,619
TANGA ... ..	14	54	455	61,864	133,741
WEST LAKE ... ..	4	—	—	1,284	1,993
TOTALS—Other      Dispensaries      and Clinics ...	108	318	6,404	541,291	1,432,712
TERRITORIAL TOTALS ...	221	7,995	175,437	1,556,779	5,181,841



## **PART IV**

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### **Morbidity and Mortality**

## MORBIDITY AND MORTALITY EXPERIENCE

Diseases occurring in the main hospitals in Tanganyika are listed in accordance with the International Statistical Classification of Diseases and Causes of Death, and the statistics from which conclusions concerning morbidity and mortality are drawn are based upon returns of diseases submitted by those government and voluntary agency hospitals which have resident doctors. Table X shows the analysis of statistics in respect of in-patients treated in those hospitals, and in Table XI similar details are given regarding out-patients. The morbidity and mortality resulting from each of the disease groups are set out diagrammatically in Figure 1, and are expressed as a percentage of the total in-patient admissions and out-patient attendances as recorded in Tables X and XI. A more detailed analysis of the infective and parasitic diseases, which form the largest group, is presented as Figure II.

The total number of diseases diagnosed in patients attending those hospitals both as in-patients and out-patients in 1963 was 2,734,945, an increase of 144,684 or 5·6 per cent on the 1962 total. The number of deaths in hospital in 1963 was 6,727, a decrease of 131 since the previous year. The percentage death rate expressed in terms of total number of diseases diagnosed in hospitalized patients was 2·65 in 1962 and 2·32 in 1963.

The morbidity shown as a percentage of the total diseases diagnosed shows a very similar pattern to previous years. Comparing Figure I showing morbidity as percentage of total cases and mortality as percentage of total deaths with Figure I for 1962, it is apparent that there has been little change. Figure II for 1963 also resembles the picture shown in the previous year. The relatively large figure for morbidity in Group XI continues to be accounted for by the inclusion within this category of normal deliveries.

The most common causes of hospital deaths in 1963 were as follows:

Pneumonia (all forms)	...	...	...	...	...	1,065
Malaria (all forms)	...	...	...	...	...	431
Gastro-enteritis (all ages)...	...	...	...	...	...	349
Tuberculosis (all forms)	...	...	...	...	...	348
Accidents	...	...	...	...	...	345
Diseases of the Heart	...	...	...	...	...	308
Tetanus	...	...	...	...	...	298
Complications of pregnancy and childbirth	...	...	...	...	...	249
Defective Nutrition	...	...	...	...	...	220
Meningitis (all forms)	...	...	...	...	...	127

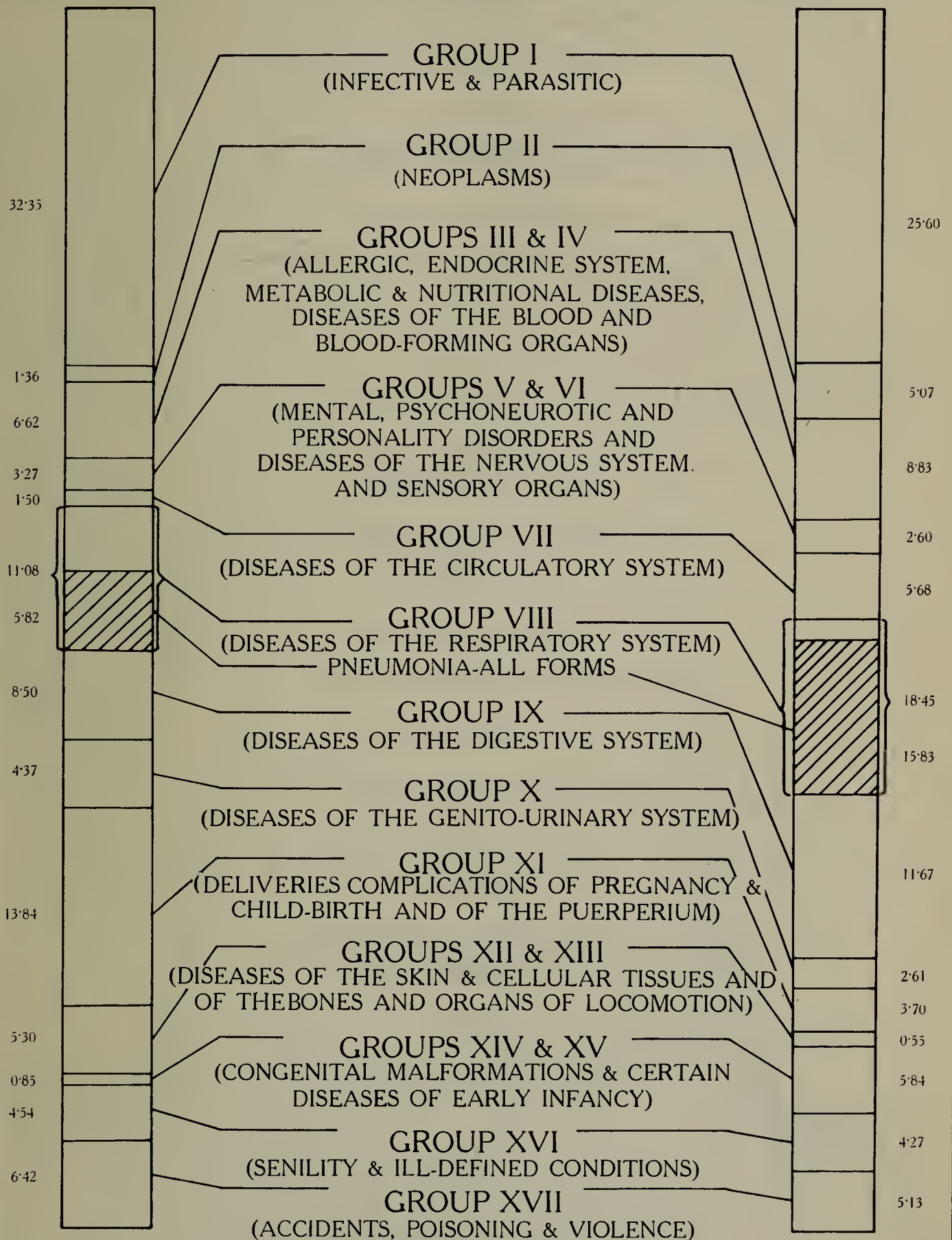
Of the deaths attributed to defective nutrition, no fewer than 129 were diagnosed as being caused by kwashiorkor.

# ALL DISEASES

FIGURE I

MORBIDITY AS  
PERCENTAGE OF  
TOTAL CASES

MORTALITY AS  
PERCENTAGE OF  
TOTAL DEATHS





# INFECTIVE & PARASITIC DISEASES GROUP I

FIGURE II

MORBIDITY AS PERCENTAGE OF GROUP I CASES

MORTALITY AS PERCENTAGE OF GROUP I DEATHS

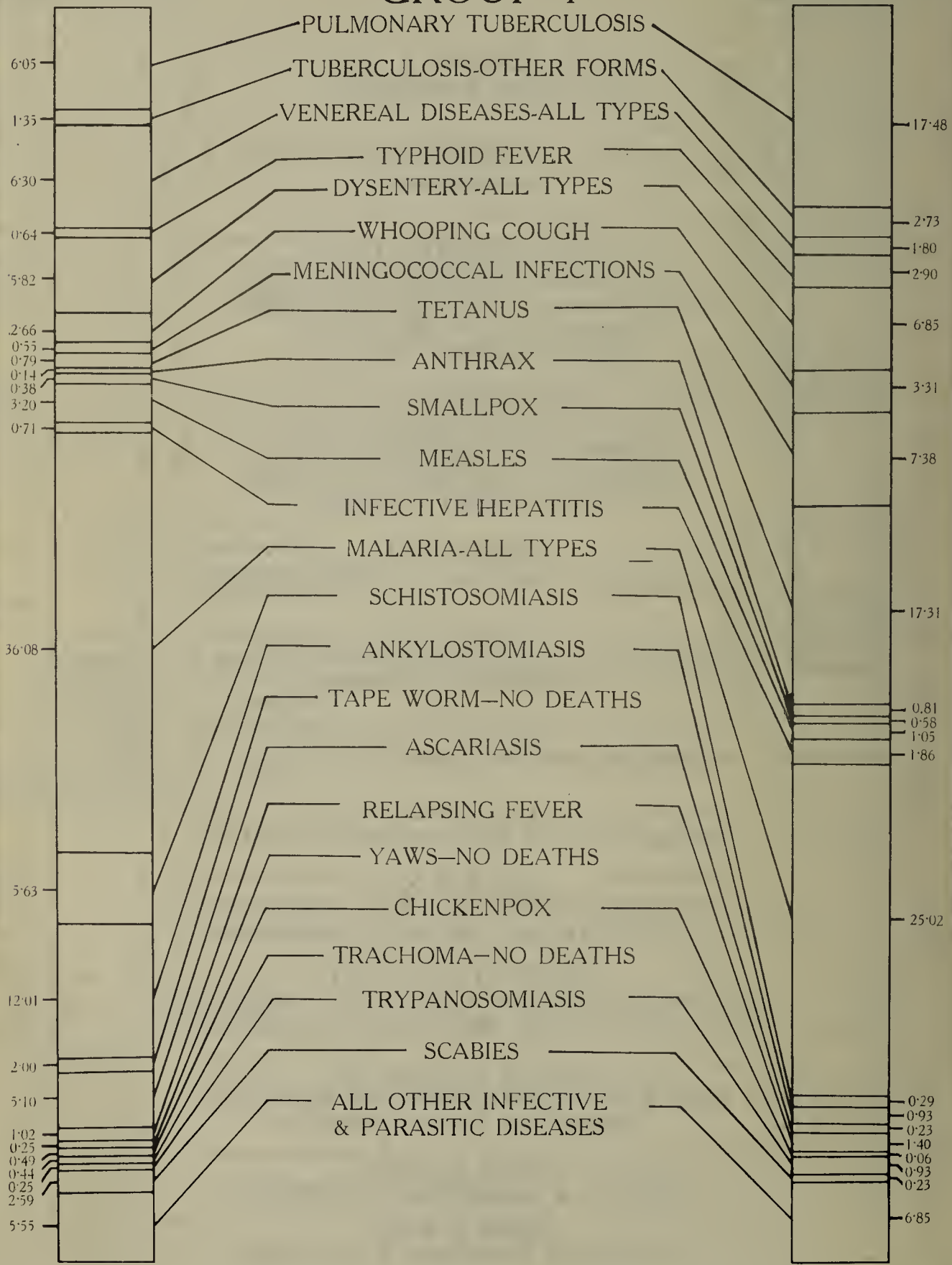


TABLE X  
DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty					
	CASES		DEATHS		CASES		DEATHS										
	M	F	Total	M	F	Total	M	F					Total				
GROUP I <i>Infective and Parasitic Diseases</i>	2,275	1,341	3,616	147	40	187	1,187	877	2,064	68	46	114	5,680	301	1-956	4-474	
	12	10	22	3	-	3	14	14	28	2	3	5	50	8	0-017	0-119	
	30	23	53	4	3	7	40	42	82	-	1	1	135	8	0-046	0-119	
	174	124	298	9	3	12	91	55	146	-	1	1	444	13	0-153	0-193	
	235	184	419	7	5	12	126	92	218	3	3	6	637	18	0-219	0-268	
	34	17	51	1	2	3	132	138	270	4	3	7	321	10	0-111	0-149	
	47	39	86	1	-	-	44	73	117	-	-	-	203	-	0-070	-	
	5	3	8	1	-	1	16	5	21	-	-	-	29	1	0-010	0-015	
	7	4	11	-	-	-	3	-	3	-	-	-	14	-	0-005	-	
	155	87	242	1	1	2	255	539	794	6	6	6	1,036	8	0-357	0-119	
	603	288	891	1	-	-	968	1,548	2,516	51	1	1	3,407	1	1-173	0-015	
	55	62	117	2	-	2	117	58	109	50	-	-	226	2	0-078	0-030	
	244	249	493	2	7	9	50	40	90	183	12	2	14	583	9	0-201	0-134
	272	100	372	24	10	34	94	89	183	27	-	-	49	48	0-191	0-714	
	Paratyphoid and other Salmonella infec- tions	18	4	22	2	-	2	11	16	-	-	-	-	2	2	0-017	0-030
	Cholera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Brucellosis (undulant fever)	44	13	57	1	2	3	31	23	54	1	-	1	111	4	0-038	0-059
	Bacillary Dysentery	401	245	646	30	6	36	296	353	649	5	6	11	1,295	47	0-446	0-699
	Amoebiasis	462	238	700	8	1	9	576	490	1,066	8	4	12	1,766	21	0-608	0-312
	Dysentery—unspecified	725	613	1,338	16	13	29	534	533	1,067	14	7	21	2,405	50	0-828	0-743
	Scarlet fever	-	-	-	-	-	-	3	1	4	-	-	-	4	-	0-001	-
	Streptococcal sore throat	202	174	376	-	1	1	62	73	135	3	-	3	511	4	0-176	0-059
	Erysipelas	2	1	3	-	-	-	7	8	15	-	-	-	18	-	0-006	-
	Septicaemia and pyaemia	11	10	21	4	6	10	36	26	62	9	5	14	83	24	0-029	0-357
	Diphtheria	-	5	5	-	2	2	2	5	7	1	1	2	12	4	0-004	0-059
	Whooping Cough	638	709	1,347	7	11	18	537	614	1,151	23	16	39	2,498	57	0-860	0-847
	Meningococcal infections	179	141	320	53	25	78	91	109	200	23	26	49	520	127	0-179	1-888
	Plague	2	1	3	-	-	-	-	-	2	-	-	-	5	-	0-002	-
	Leprosy	146	68	214	3	3	6	83	68	151	5	5	10	365	16	0-126	0-238
	Tetanus	284	229	513	125	85	210	124	102	226	51	37	88	739	298	0-254	4-430
	Anthrax	54	36	90	2	4	6	19	22	41	5	3	8	131	14	0-045	0-208
	Acute poliomyelitis	53	41	94	2	2	4	15	19	34	2	4	6	128	10	0-044	0-149
	Acute infectious encephalitis	7	7	14	1	-	1	28	19	47	7	9	16	61	17	0-021	0-253
	Late effects of acute poliomyelitis and acute infectious encephalitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Varicella major	22	14	36	-	-	-	32	38	70	-	-	-	106	-	0-037	0-089
	Varicella minor	90	77	167	3	-	3	15	16	31	2	1	3	198	6	0-068	0-068
	38	63	101	-	2	2	29	26	55	1	1	2	156	4	0-054	0-059	

TABLE X—(contd.)  
DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with Resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty				
	CASES		DEATHS		CASES		DEATHS									
	M	F	Total	M	F	Total	M	F					Total			
Measles	1,079	819	1,898	7	6	13	566	540	1,106	3	2	5	3,004	18	1.034	0.268
Yellow fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infectious hepatitis	316	146	462	15	9	24	116	90	206	6	2	8	668	32	0.230	0.476
Rabies	5	12	17	2	2	4	10	16	26	1	1	2	43	6	0.015	0.089
Louse-borne epidemic typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flea-borne endemic typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tick-borne typhus	3	2	5	—	—	—	4	2	6	—	—	—	—	—	0.004	—
Mite-borne typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhus unspecified and other rickettsial diseases	6	3	9	—	—	—	18	22	40	—	—	—	49	—	—	—
Vivax Malaria (benign tertian)	352	185	537	2	2	4	612	655	1,267	—	4	4	1,804	8	0.017	0.119
Malariae malaria (quartan)	104	105	209	3	2	5	66	56	122	1	1	2	331	7	0.114	0.104
Falciparum Malaria (Malignant tertian)	5,290	4,535	9,825	72	58	130	4,368	5,403	9,771	55	50	105	19,596	235	6.748	3.493
Blackwater Fever	6	3	9	1	1	2	2	3	5	—	2	3	14	4	0.005	0.059
Other and unspecified forms of Malaria	4,509	3,266	7,775	58	49	107	2,177	2,292	4,469	36	34	70	12,244	177	4.216	2.631
Schistosomiasis vesical (S. haem.)	1,289	910	2,199	—	—	—	1,267	1,151	2,418	—	1	1	4,617	1	1.590	0.015
Schistosomiasis intestinal (S. mansoni)	144	91	235	2	1	3	192	148	340	—	—	—	575	4	0.198	0.059
Schistosomiasis pulmonary (S. japonicum)	19	15	34	—	—	—	21	—	21	—	—	—	55	—	0.019	—
Schistosomiasis other and unspecified	22	13	35	—	—	—	3	1	4	—	—	—	39	—	0.013	—
Hydatid disease	4	2	6	—	—	—	13	—	—	—	—	—	19	—	0.007	0.015
Filaria (bancrofti)	142	49	191	1	—	1	105	49	154	—	1	1	345	2	0.119	0.030
Onchocerciasis	13	69	82	—	—	—	3	—	3	—	—	—	85	—	0.029	—
Other filariasis	100	10	110	1	—	1	15	23	38	—	—	—	148	1	0.051	0.015
Ankylostomiasis	2,878	1,977	4,855	9	2	11	2,711	3,717	6,428	3	2	5	11,283	16	3.885	0.238
Tapeworm and other cestode infestations	554	427	981	—	—	—	364	539	903	—	—	—	1,884	—	0.649	—
Ascariasis	548	884	1,732	—	1	1	1,249	1,813	3,062	1	2	3	4,794	4	1.651	0.059
Guinea worm (dracunculosis)	6	5	11	—	—	—	3	4	7	—	—	—	18	—	0.006	—
Other diseases due to helminths	161	160	321	—	—	—	293	314	607	—	—	—	928	—	0.320	—
Lymphogranuloma venereum	11	9	20	—	1	1	16	19	35	—	—	—	55	1	0.019	0.015
Granuloma inguinale, venereal	13	9	22	—	—	—	4	5	9	—	—	—	31	—	0.011	—
Chancroid and other unspecified venereal disease	45	43	88	—	—	—	6	6	12	—	—	—	100	—	0.034	—
Food poisoning infection and intoxication	151	85	236	4	1	5	63	62	125	6	3	9	361	14	0.124	0.208
Relapsing fever, louse-borne	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever, tick-borne	144	105	249	6	2	8	318	390	708	9	7	16	957	24	0.330	0.357
Leptospirosis icterohaemorrhagica (Weil's disease)	6	7	13	—	—	—	—	—	—	—	—	—	13	—	0.004	—
Yaws	83	58	141	—	—	—	43	56	99	—	—	—	240	—	0.083	—
Chickenpox	191	122	313	1	—	1	85	60	145	—	—	—	458	1	0.158	0.015
Mumps	181	147	328	—	1	1	45	29	74	—	—	—	402	1	0.138	0.015
Dengue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trachoma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sandfly fever	57	43	100	—	—	—	130	183	313	—	—	—	413	—	0.142	—
Leishmaniasis	3	—	3	—	—	—	—	2	2	—	—	—	—	—	0.001	—



TABLE X—(contd.)

## DISEASES

## IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL CASES TOTAL	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty		
	CASES		DEATHS		CASES		DEATHS							
	M	F	Total	M	F	Total	M	F					Total	
Trypanosomiasis gambiensiis	13	11	24	—	—	—	5	2	7	1	31	1	0.011	0.015
Trypanosomiasis rhodiensis	110	18	138	6	1	7	19	2	21	9	149	—	0.051	0.134
Trypanosomiasis Other and unspecified	42	12	54	2	3	5	3	—	3	6	57	—	0.020	0.089
Dermatophytosis	30	20	50	1	—	1	15	15	30	1	80	—	0.028	0.015
Scabies	678	446	1,124	2	2	4	577	731	1,308	—	2,432	—	0.837	0.055
All other diseases classified as infective and parasitic	240	189	429	4	2	6	365	327	692	3	1,121	3	0.386	0.178
											93,940	1,722	32.348	25.598
GROUP II														
Neoplasms														
Malignant neoplasm of buccal and pharynx	16	5	21	2	1	3	32	9	41	—	62	3	0.021	0.045
Malignant neoplasm of oesophagus	3	—	3	—	—	—	4	3	7	—	10	—	0.003	—
Malignant neoplasm of stomach	20	11	31	3	3	6	61	50	111	6	142	35	0.049	0.520
Malignant neoplasm of intestine except rectum	9	4	13	3	3	6	23	32	55	7	68	23	0.023	0.342
Malignant neoplasm of rectum	6	4	10	2	—	2	3	7	10	1	20	3	0.007	0.045
Malignant neoplasm of larynx	4	—	4	1	—	1	1	—	1	—	5	1	0.002	0.015
Malignant neoplasm of trachea and of bronchus and lung not specified as secondary	7	13	20	2	—	2	15	6	21	2	41	4	0.014	0.059
Malignant neoplasm of breast	6	40	46	—	9	9	2	25	27	2	73	11	0.025	0.164
Malignant neoplasm of cervix uteri	—	138	138	—	10	10	—	154	154	6	292	16	0.101	0.238
Malignant neoplasm of other and unspecified parts of uterus	—	84	84	—	2	2	—	69	69	7	153	9	0.053	0.134
Malignant neoplasm of prostate	56	—	56	7	—	7	62	8	70	12	126	19	0.044	0.282
Malignant neoplasm of skin	45	20	65	3	1	4	37	22	59	1	124	6	0.043	0.089
Malignant neoplasm of bone and connective tissue	46	26	72	4	1	5	40	25	65	3	137	11	0.047	0.164
(a) Malignant neoplasm of liver and biliary passages	106	52	158	26	5	31	98	42	140	33	298	76	0.103	1.129
(b) Malignant neoplasm of all other and unspecified sites	167	104	271	27	13	40	103	88	191	16	462	62	0.159	0.922
Leukaemia and aleukaemia	48	19	67	7	5	12	20	7	27	2	94	15	0.032	0.223
Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	35	26	61	3	1	4	31	36	67	5	128	14	0.044	0.208
Benign neoplasms and neoplasms of unspecified nature	328	545	873	18	8	26	224	609	833	2	1,703	33	0.587	0.490
											3,941	341	1,357	5.069

TABLE X—(contd.)  
DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS					VOLUNTARY AGENCY HOSPITALS					TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty
	CASES			DEATHS		CASES			DEATHS					
	M	F	Total	M	F	Total	M	F	Total					
GROUPS III & IV  <i>Allergic, Endocrine system, Metabolic and Nutritional Diseases, and Diseases of the Blood, and Blood-Forming Organs</i>	19	24	43	2	1	3	18	76	94	137	6	0.089	0.047	
	11	18	29	3	1	4	19	38	57	86	5	0.074	0.030	
	226	85	311	20	4	24	87	68	155	466	32	0.476	0.160	
	222	224	446	—	—	—	39	57	96	542	4	0.187	0.059	
	325	238	563	—	1	1	29	32	61	624	5	0.074	0.215	
	70	28	98	4	—	4	30	45	75	173	5	0.060	0.074	
	730	609	1,339	45	38	83	361	365	726	2,065	129	0.711	1.918	
	540	549	1,089	24	34	58	487	620	1,107	2,196	77	0.756	1.145	
	487	366	853	26	25	51	133	176	309	1,162	62	0.400	0.922	
	528	652	1,180	29	17	46	1,893	2,747	4,640	5,820	113	2.004	1.880	
	645	547	1,192	37	25	62	510	660	1,170	2,362	104	0.813	1.546	
	773	701	1,474	21	7	28	545	457	1,002	2,476	31	0.853	0.461	
	426	242	668	8	1	9	225	225	450	1,118	21	0.385	0.312	
GROUP V  <i>Mental Psychoneurotic and Personality Diseases</i>										19,227	594	6.621	8.830	
Psychoses Psychoneuroses and disorders of personality Mental deficiency	126	49	175	—	—	—	51	87	138	313	2	0.108	0.030	
	101	119	220	—	—	—	95	100	195	415	—	0.143	0.015	
	104	66	170	1	—	1	19	29	48	218	1	0.075	0.045	
										946	3	0.326	0.045	

TABLE X—(contd.)

DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS							TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty		
	CASES		DEATHS		CASES			DEATHS									
	M	F	Total	M	F	Total	M	F	Total	M	F	Total					
GROUP VI <i>Diseases of the Nervous System and Sense Organs</i>	59	38	97	9	4	13	55	37	92	16	8	24	189	37	0-065	0-550	
	84	69	153	24	20	44	97	55	152	20	12	32	305	76	0-105	1-130	
	14	58	72	2	—	2	1	1	2	—	—	—	74	2	0-025	0-030	
	169	65	234	—	2	2	101	76	177	2	1	3	411	5	0-142	0-074	
	663	443	1,106	5	2	7	927	831	1,758	2	—	2	2,864	9	0-086	0-134	
	109	57	166	—	—	—	243	148	391	1	—	1	557	1	0-192	0-015	
	37	15	52	—	—	—	31	23	54	—	—	—	106	—	0-036	—	
	77	53	130	—	—	—	160	142	302	—	—	—	432	—	0-149	—	
	227	137	364	3	—	3	253	202	455	3	—	3	819	6	0-282	0-089	
	71	104	175	—	—	—	120	110	230	—	—	—	405	—	0-139	—	
	453	264	717	12	2	14	481	487	968	—	1	1	1,685	15	0-580	0-223	
	230	144	374	6	1	7	178	167	345	7	7	14	719	21	0-248	0-312	
													8,566	172	2-949	2-557	
	GROUP VII <i>Diseases of the Circulatory System</i>	224	148	372	2	1	3	70	77	147	—	1	1	519	4	0-179	0-059
		82	57	139	15	9	24	74	82	156	3	4	7	295	31	0-102	0-461
30		18	48	2	1	3	171	152	323	20	12	32	371	35	0-128	0-520	
470		303	773	75	43	118	454	470	924	50	36	86	1,697	204	0-584	3-033	
180		92	272	20	7	27	85	93	178	6	5	11	450	38	0-155	0-565	
55		32	87	6	3	9	84	93	177	1	—	1	264	10	0-091	0-149	
23		12	35	—	4	4	35	35	70	3	4	7	105	11	0-036	0-164	
234		176	410	19	13	32	114	117	231	10	7	17	641	49	0-220	0-728	
													4,342	382	1-495	5-679	



TABLE X--(contd.)

DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	G VERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty	
	CASES		DEATHS		CASES		DEATHS						
	M	F	Total	M	F	Total	M	F					Total
GROUP VIII  <i>Diseases of the Respiratory System</i>	996	849	1,845	13	9	22	657	915	1,572	4	13	35	1.177
	159	106	265	—	—	—	506	529	1,035	4	10	10	0.448
	2,923	2,028	4,951	127	100	227	1,390	1,197	2,587	50	91	318	2.595
	2,366	2,579	4,945	249	211	460	1,541	1,762	3,303	108	231	691	2.840
	255	167	422	8	6	14	362	333	695	24	42	56	0.832
	1,934	1,714	3,648	22	20	42	765	869	1,634	7	8	50	0.743
	833	534	1,367	8	8	16	339	317	656	—	—	16	0.238
	219	170	389	3	6	9	161	178	339	—	1	10	0.149
	64	26	90	14	1	15	59	49	108	4	7	22	0.327
	96	34	130	1	2	3	161	93	254	1	1	4	0.059
	51	28	79	—	—	—	32	11	43	—	—	—	—
	634	427	1,061	8	8	16	365	399	764	6	13	29	0.431
													18.448
GROUP IX  <i>Diseases of the Digestive System</i>	181	221	402	—	—	—	300	333	633	—	—	—	0.356
	92	74	166	—	—	—	174	242	416	—	—	—	0.200
	98	64	162	12	5	17	162	49	211	2	5	22	0.128
	56	30	86	—	1	1	141	153	294	—	—	1	0.131
	226	164	390	2	1	3	311	247	558	1	1	4	0.326
	220	116	336	5	—	5	129	99	228	3	4	9	0.134
	2,206	1,341	3,547	80	25	105	1,165	1,020	2,185	28	49	154	1.974
	1,209	1,211	2,420	73	75	148	871	789	1,660	53	87	235	1.405
	853	719	1,572	48	35	83	487	540	1,027	18	31	114	0.895
	70	76	146	3	1	4	33	46	79	1	—	5	0.074
	330	133	463	51	11	62	172	92	264	31	37	99	0.250
	28	15	43	—	1	1	32	21	53	1	2	3	0.033
	2,726	3,024	5,750	47	45	745	745	825	1,570	26	47	139	2.521
												8.491	
												11.669	

TABLE X—(contd.)  
DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS					VOLUNTARY AGENCY HOSPITALS					TERRITORIAL TOTAL CASES	TERRITORIAL TOTAL DEATHS	Percent-age Morbidity	Percent-age Mortality		
	CASES			DEATHS		CASES			DEATHS							
	M	F	Total	M	F	Total	M	F	Total							
GROUP X																
<i>Diseases of the Genito-Urinary System</i>																
Acute nephritis	82	43	125	7	5	12	121	110	231	9	5	14	356	26	0.123	0.386
Chronic, other and unspecified nephritis	101	40	141	18	5	23	78	88	166	8	8	16	307	39	0.106	0.580
Infections of kidney (other than tuberculous)	43	49	92	5	3	8	71	87	158	—	6	6	250	14	0.086	0.208
Calculi of urinary system	34	4	38	—	—	—	40	10	50	—	—	—	88	—	0.030	—
Hyperplasia of prostate	207	—	207	10	—	10	167	4	171	9	1	10	378	20	0.130	0.297
Diseases of breast	5	250	255	—	2	2	5	206	211	—	1	1	466	3	0.160	0.045
Hydrocele	1,148	30	1,178	3	—	3	700	17	717	1	1	2	1,895	5	0.653	0.074
Disorders of menstruation	—	974	974	—	3	3	—	780	780	—	—	—	1,754	3	0.604	0.045
All other diseases of the genito-urinary system	1,586	2,011	3,597	25	15	40	1,263	2,358	3,621	15	11	26	7,218	66	2.485	0.981
													12,712	176	4.377	2.616
GROUP XI																
<i>Deliveries and Complications of Pregnancy, Childbirth and the Puerperium</i>																
Sepsis of pregnancy, childbirth and the puerperium	—	341	341	—	16	16	—	283	283	—	9	9	624	25	0.215	0.372
Toxaemias of pregnancy and puerperium	—	178	178	—	3	3	—	166	166	—	1	1	344	4	0.118	0.059
Haemorrhage of pregnancy and childbirth	—	301	301	—	5	5	—	574	574	—	15	15	875	20	0.301	0.297
Abortion, without mention of sepsis or toxæmia	—	2,214	2,214	—	7	7	—	1,178	1,178	—	3	3	3,392	10	1.168	0.149
Abortion with sepsis	—	325	325	—	16	16	—	281	281	—	2	2	606	18	0.209	0.268
Other complications of pregnancy, childbirth and the puerperium	—	3,544	3,544	—	100	100	—	3,738	3,738	—	67	67	7,282	167	2.508	2.483
Delivery without complications	—	17,890	17,890	—	5	5	—	9,185	9,185	—	—	—	27,075	5	9.323	0.074
													40,198	249	13.842	3.702

TABLE X—(contd.)  
DISEASES  
IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidi- ty	Percent- age Mortali- ty					
	CASES		DEATHS		CASES		DEATHS										
	M	F	Total	M	F	Total	M	F					Total				
GROUPS XII & XIII  <i>Diseases of the Skin and Cellular Tissues, and Diseases of the Bones and Organs of Movement</i>	1,882	1,159	3,041	2	2	4	905	771	1,676	3	3	6	4,717	10	1-624	0-149	
	748	261	1,009	1	-	1	259	216	475	1	-	1	1,484	2	0-511	0-030	
	440	300	740	1	-	1	279	295	574	2	-	2	1,314	3	0-452	0-045	
	219	103	322	-	-	-	161	102	263	-	-	-	585	-	0-201	-	
	37	11	48	-	1	1	53	33	86	-	1	1	134	2	0-046	0-030	
	1,792	930	2,722	8	2	10	615	458	1,073	2	5	7	3,795	17	1-307	0-251	
	474	279	753	-	1	1	387	331	718	-	-	-	1,471	1	0-507	0-015	
	837	525	1,362	-	1	1	278	254	532	1	-	1	1,894	2	0-652	0-030	
													15,394	37	5-300	0-550	
	GROUP XIV  <i>Congenital Malformations</i>	6	8	14	-	-	-	7	11	18	2	3	5	32	5	0-011	0-074
7		16	23	-	1	1	18	21	39	4	4	8	62	9	0-021	0-134	
34		30	64	5	1	6	106	102	208	10	12	22	272	28	0-094	0-416	
													366	42	0-126	0-624	
GROUP XV  <i>Certain Diseases of Early Infancy</i>	16	13	29	1	-	1	43	45	88	14	9	23	117	24	0-040	0-357	
	15	4	19	4	1	5	69	130	199	12	13	25	218	30	0-075	0-446	
	118	124	242	1	4	5	53	69	122	3	1	4	364	9	0-125	0-134	
	7	15	22	-	-	-	29	52	81	-	-	-	103	-	0-035	-	
	23	14	37	1	1	2	45	54	99	5	8	13	136	15	0-047	0-223	



TABLE X—(contd.)  
DISEASES

IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS				VOLUNTARY AGENCY HOSPITALS				TERRI- TORIAL TOTAL CASES	TERRI- TORIAL TOTAL DEATHS	Percent- age Morbidity	Percent- age Mortality	
	CASES		DEATHS		CASES		DEATHS						
	M	F	Total	M	F	Total	M	F					Total
Haemolytic disease of newborn ... ..	3	4	7	1	1	2	12	7	4	11	13	0.194	
All other defined diseases of early infancy ... ..	40	27	67	5	—	5	50	11	11	22	27	0.067	
Ill-defined diseases peculiar to early infancy, and immaturity (all types) ... ..	49	87	136	14	22	36	377	94	103	197	233	0.324	
GROUP XVI													
<i>Symptoms, Senility and Ill-defined Conditions</i>													
Senility without mention of psychosis ... ..	114	68	182	15	8	23	49	3	—	3	26	0.089	
(a) Pyrexia of unknown origin ... ..	2,995	2,345	5,340	68	57	125	625	19	20	39	164	2.317	
(b) Observation, without need for further medical care ... ..	977	859	1,836	14	7	21	822	—	—	—	21	1.454	
(c) All other ill-defined causes of morbidity	597	321	918	16	6	22	438	31	23	54	76	0.678	
GROUP XVII													
<i>Accidents, Poisoning and Violence</i>													
Fracture of skull ... ..	188	29	217	32	1	33	58	4	—	4	37	0.100	
Fracture of spine and trunk ... ..	177	50	227	10	4	14	61	2	—	2	16	0.238	
Fracture of limbs ... ..	2,638	929	3,567	28	6	34	504	1	2	3	37	1.478	
Dislocation without fracture ... ..	429	176	605	—	—	—	107	—	1	1	1	0.262	
Sprains and strains of joints and adjacent muscles ... ..	681	201	882	—	1	1	118	—	—	—	1	0.015	
Head injury (excluding fracture) ... ..	271	56	327	11	3	14	158	2	1	3	17	0.189	
Internal injury of chest, abdomen and pelvis ... ..	77	35	112	12	9	21	68	5	2	7	28	0.416	
Laceration and open wounds ... ..	3,267	1,108	4,375	13	4	17	740	2	2	4	21	1.882	
Superficial injury, confusion and crushing with intact skin surface ... ..	1,030	383	1,413	6	3	9	280	—	—	—	9	0.638	
Effects of foreign body entering through orifice ... ..	154	98	252	—	—	—	69	1	1	2	2	0.131	
Burns... ..	627	477	1,104	28	37	65	272	9	8	17	82	0.548	
Effects of poisons ... ..	268	211	479	10	10	20	162	27	35	62	82	0.289	
All other and unspecified effects of external causes ... ..	428	285	713	4	2	6	195	2	4	6	12	0.359	
GRAND TOTALS ... ..													
	80,831	83,675	164,506	2,338	1,660	3,998	52,484	1,441	1,288	2,729	345	6.419	
							73,416					5.129	
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TABLE XI  
DISEASES

OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS			VOLUNTARY AGENCY HOSPITALS			Territorial Total	Group Total	Percentage Morbidity in Groups
	Males	Females	Total	Males	Females	Total			
GROUP 1									
Infective and Parasitic Diseases (and influenza, all types meningitis and eye diseases)									
Tuberculosis of the respiratory system ...	1,732	998	2,730	862	758	1,620	4,350	-	0.178
Other Tuberculosis diseases ...	374	296	660	88	67	155	815	-	0.033
Syphilis ...	3,585	3,044	6,629	1,281	1,627	2,908	9,537	-	0.390
Gonorrhoea...	24,265	10,541	34,806	4,035	3,587	7,622	42,428	-	1.736
Other venereal diseases ...	3,156	2,766	5,922	133	141	274	6,196	-	0.253
Fever of uncertain origin ...	112,026	96,787	208,813	11,127	11,616	22,743	231,556	-	9.473
Bacillary dysentery ...	4,333	3,847	8,180	601	706	1,307	9,487	-	0.388
Amoebiasis ...	364	463	827	804	1,069	1,873	2,700	-	0.110
Other dysenteries ...	10,479	8,890	19,369	2,350	2,242	4,592	23,961	-	0.980
Diphtheria ...	33	5	38	6	79	85	123	-	0.005
Whooping Cough ...	4,313	5,094	9,407	1,485	1,634	3,119	12,526	-	0.512
Meningitis ...	15	24	39	12	11	23	62	-	0.003
Plague ...	2,271	1,893	4,164	773	818	1,591	5,755	-	0.235
Leprosy ...	87	79	166	8	2	10	176	-	0.007
Tetanus ...	116	85	201	6	11	17	218	-	0.009
Anthrax ...	431	397	828	272	251	523	1,351	-	0.055
Relapsing Fever ...	965	840	1,805	1,674	718	2,392	4,197	-	0.172
Yaws ...	64	43	107	12	10	22	129	-	0.005
Acute Poliomyelitis ...								-	
Smallpox:—								-	
(a) Variola Major ...	47	42	89	13	15	28	117	-	0.005
(b) Variola Minor ...	105	69	174	16	16	32	206	-	0.008
Measles ...	7,588	8,491	16,079	1,351	1,381	2,732	18,811	-	0.770
Chickenpox...	3,194	3,106	6,300	298	329	627	6,927	-	0.283
Mumps ...	3,054	2,308	5,362	231	179	410	5,772	-	0.236
Yellow Fever ...	—	—	—	—	—	—	—	-	—
Rabies ...	29	24	53	—	—	—	53	-	0.002
Trachoma ...	1,017	793	1,810	677	744	1,421	3,231	-	0.132
Typhus and other rickettsial diseases ...	4	15	19	1	2	3	22	-	0.001
Malaria:—								-	
(a) Benign Tertian ...	3,457	3,460	6,917	11,273	11,713	22,986	29,903	-	1.223
(b) Quartan ...	695	480	1,175	1,680	1,609	3,289	4,464	-	0.183
(c) Subtertian ...	30,880	26,586	57,466	20,957	22,813	43,770	101,236	-	4.142
(d) Unclassified ...	49,980	42,408	92,388	10,044	11,754	21,798	114,186	-	4.672
Blackwater fever ...	—	—	—	—	—	—	—	-	—
Trypanosomiasis ...	14	—	14	1	—	1	15	-	—
Schistosomiasis:—								-	
(a) Vesical (haematobium) ...	19,204	14,007	33,211	3,852	3,677	7,529	40,740	-	1.667
(b) Intestinal (mansoni) ...	1,579	1,357	2,936	624	664	1,288	4,224	-	0.173

TABLE XI—contd.

DISEASES

OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS			VOLUNTARY AGENCY HOSPITALS			Territorial Total	Group Total	Percentage Morbidity in Groups
	Males	Females	Total	Males	Females	Total			
Tapeworm ...	4,960	4,020	8,980	895	1,587	2,482	11,462	—	0.469
Filariasis (bancrofti) ...	393	252	645	86	25	111	756	—	0.031
Onchocerciasis ...	178	29	207	—	35	35	242	—	0.010
Ankylostomiasis ...	15,526	13,879	29,405	9,851	10,083	19,934	49,339	—	2.018
Ascariasis ...	8,252	7,871	16,123	3,359	3,965	7,324	23,447	—	0.959
Guinea Worm (draunculosis) ...	47	123	170	2	7	9	179	—	0.007
Tinea ...	4,004	2,863	6,867	669	485	1,154	8,021	—	0.328
Scabies ...	17,328	14,677	32,005	6,050	5,374	11,424	43,429	—	1.777
All other infective and parasitic diseases ...	9,643	8,706	18,349	3,094	3,300	6,394	24,743	—	1.012
								847,092	34.652
GROUP II									
Neoplasms									
Malignant neoplasms ...	58	98	156	74	98	172	328	—	0.013
Non-malignant ...	612	558	1,170	106	249	355	1,525	—	0.062
Unspecified ...	855	596	1,451	76	93	169	1,620	—	0.067
								3,473	0.142
GROUP III									
Allergic, Endocrine system, Metabolic and Nutritional Diseases									
Asthma ...	3,656	2,546	6,202	1,456	1,013	2,469	8,671	—	0.355
Diabetes ...	374	243	617	66	56	122	739	—	0.030
Vitamin deficiency states ...	6,857	6,513	13,370	4,000	4,561	8,561	21,931	—	0.897
Kwashiorkor ...	2,915	3,426	6,341	712	608	1,320	7,661	—	0.313
Other allergic, endocrine system, metabolic, and nutritional diseases ...	7,723	6,921	14,644	1,826	1,871	3,697	18,341	—	0.750
								57,343	2.345
GROUP IV									
Diseases of the Blood and Blood-Forming Organs									
All diseases of the blood and blood-forming organs ...	4,236	4,151	8,387	4,646	5,884	10,530	18,917	—	0.774
								18,917	0.774



TABLE XI—contd.

## DISEASES

OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS			VOLUNTARY AGENCY HOSPITALS			Territorial Total	Group Total	Percentage Morbidity in Groups
	Males	Females	Total	Males	Females	Total			
GROUPS V & VI									
Mental, Psychoneurotic and Personality Diseases, and Diseases of the Nervous System and Sense Organs									
Mental disorders ...	200	587	787	83	119	202	989	—	0.040
Cerebral haemorrhage ...	3	3	6	5	2	7	13	—	—
Epilepsy ...	310	155	465	210	127	337	802	—	0.033
Other diseases of nervous system ...	5,890	3,630	9,520	719	753	1,472	10,992	—	0.450
Inflammatory and other diseases of eye and annexa except trachoma ...	36,920	32,094	69,014	9,876	10,172	20,048	89,062	—	3.643
Diseases of ears and mastoid ...	15,411	12,494	27,905	3,663	3,539	7,202	35,107	—	1.436
							135,965		5.602
GROUP VII									
Diseases of the Circulatory System									
(a) Heart disease ...	828	637	1,465	2,225	617	2,842	4,307	—	0.176
(b) Other circulatory diseases ...	2,090	1,720	3,810	995	1,117	2,072	5,882	—	0.240
							10,189		0.416
GROUP VIII									
Diseases of the Respiratory System									
Pneumonia ...	10,549	11,414	21,963	3,213	3,664	6,877	28,840	—	1.180
Other diseases of respiratory system ...	179,695	150,149	329,844	24,728	23,496	48,224	378,068	—	15.465
							406,908		16.645
GROUP IX									
Diseases of Digestive System									
Of Teeth, and supporting structures:—									
(a) Caries ...	17,484	17,872	35,356	3,347	3,656	7,003	42,359	—	1.733
(b) Other conditions ...	7,506	4,976	12,482	893	939	1,832	14,314	—	0.586
Appendicitis ...	75	49	124	41	32	73	197	—	0.008
Intestinal obstruction and hernia ...	1,756	193	1,949	491	81	572	2,521	—	0.103
Gastro-enteritis:—									
(a) Between 4 weeks and 2 years ...	12,586	13,289	25,875	2,754	2,828	5,582	31,457	—	1.286
(b) 2 years and over ...	11,867	8,993	20,860	1,925	1,978	3,903	24,763	—	1.013
Cirrhosis of liver ...	251	266	517	52	37	89	606	—	0.025
Other diseases of liver and bile passages ...	835	567	1,402	296	271	566	1,968	—	0.081
Other diseases of digestive system ...	97,903	95,100	193,003	8,898	10,671	19,569	212,572	—	8.695
							330,757		13.530

TABLE XI—*contd.*

DISEASES

OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS			VOLUNTARY AGENCY HOSPITALS			Territorial Total	Group Total	Percentage Morbidity in Groups
	Males		Total	Males		Total			
GROUP X									
Diseases of the Genito-Urinary System									
Nephritis ...	506	415	921	571	81	652	1,573	—	0·064
Other diseases of Genito-Urinary System ...	22,056	24,562	46,618	4,325	9,122	13,447	60,065	—	2·457
								61,638	2·521
GROUP XI									
Complications of Pregnancy, Childbirth and the Puerperium									
(a) Toxaemias of pregnancy ...	—	610	610	—	172	172	782	—	0·032
(b) Abortion ...	—	964	964	—	613	613	1,577	—	0·065
(c) Other conditions of the puerperal state ...	—	3,376	3,376	—	3,492	3,492	6,868	—	0·280
Normal deliveries ...	—	—	—	—	—	—	—	—	—
								9,227	0·377
GROUPS XII & XIII									
Diseases of the Skin and Cellular Tissue, and Diseases of Bones and Organs of Locomotion									
Ulcers ...	79,943	45,127	125,070	13,830	11,897	25,727	150,797	—	6·168
Rheumatic conditions ...	21,183	17,169	38,352	3,273	3,788	7,061	45,413	—	1·858
Other diseases of bones, skin, and musculo-skeletal system ...	41,360	31,019	72,379	5,216	4,921	10,137	82,516	—	3·375
								278,726	11·401
GROUPS XIV & XV									
Congenital Malformation and certain Diseases of Early Infancy									
(a) Diarrhoea of new-born ...	3,924	3,763	7,687	242	372	614	8,301	—	0·339
(b) Ophthalmia neonatorum ...	328	485	813	48	61	109	922	—	0·038
(c) Immaturity ...	102	133	235	81	108	189	424	—	0·017
(d) All other malformations and diseases of early infancy ...	442	186	628	182	171	353	981	—	0·040
								10,628	0·434
GROUP XVI									
Senility and Ill-Defined Conditions									
Senility ...	985	910	1,895	492	267	759	2,654	—	0·108
All other ill-defined causes of morbidity ...	7,902	7,715	15,617	2,207	2,711	4,918	20,535	—	0·840
								23,189	0·948

TABLE XI—*contd.*  
DISEASES  
OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS  
(Hospitals with resident doctors only—1st January, 1963 to 31st December, 1963)

DISEASES	GOVERNMENT HOSPITALS			VOLUNTARY AGENCY HOSPITALS			Territorial Total	Group Total	Percentage Morbidity in Groups
	Males	Females	Total	Males	Females	Total			
GROUP XVII									
<i>Accidents, Poisoning and Violence</i>									
Fractures and dislocations	4,589	2,210	6,799	532	255	787	7,586	—	0.310
Injuries by animals and insects	2,739	1,751	4,490	471	342	813	5,303	—	0.217
Other wounds and superficial injuries (excluding burns)	41,565	22,587	64,152	13,587	9,754	23,341	87,493	—	3.579
Burns and scalds	4,896	4,647	9,543	947	695	1,642	11,185	—	0.458
Poisons	281	202	483	32	23	55	538	—	0.022
All other injuries from external causes	18,521	8,901	27,422	5,732	3,849	9,581	37,003	—	1.513
Examinations	16,746	9,772	26,518	27,228	46,633	73,861	100,379	—	4.106
TOTALS	1,047,300	857,392	1,904,692	256,884	282,963	539,847	2,444,539	249,487	10.205
								2,444,539	—





